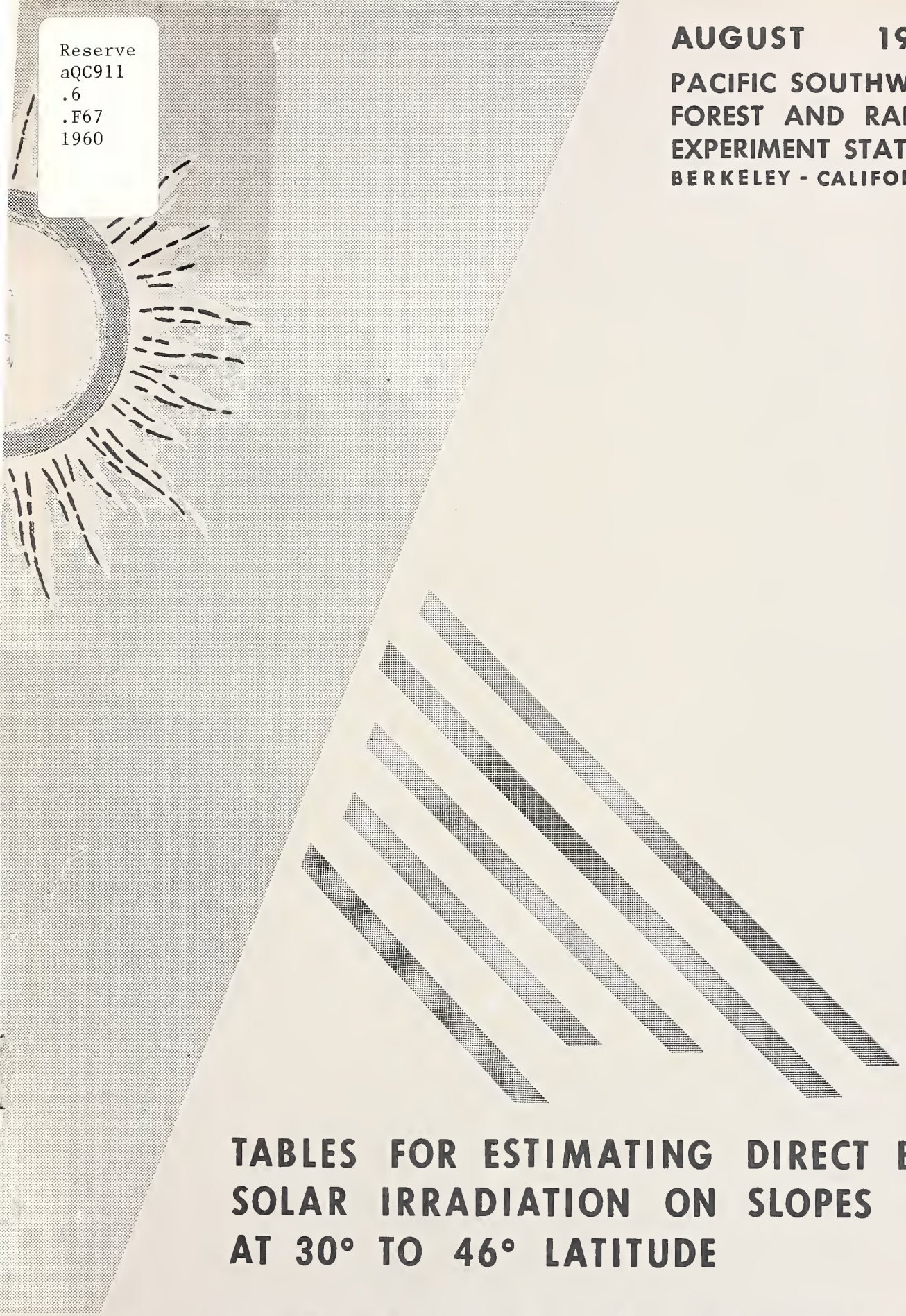
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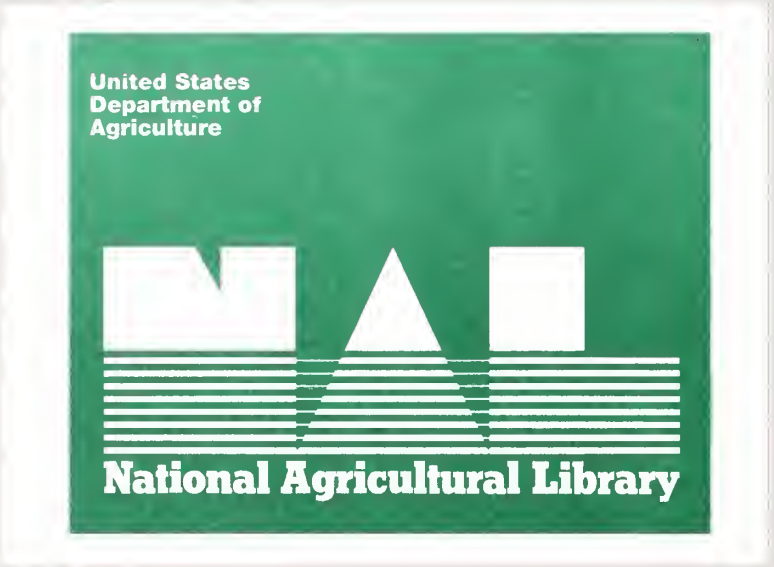


TABLES FOR ESTIMATING DIRECT BEAM SOLAR IRRADIATION ON SLOPES AT 30° TO 46° LATITUDE

W. L. FONS, H. D. BRUCE, AND ALAN McMASTERS

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INTRODUCTION

Knowledge of natural variations in solar radiation, and of the causes of variation, is essential for a full understanding of many natural phenomena. In forestry, the intensity and duration of sunshine is known to affect a wide variety of land management activities, from establishment of plant cover to protection of forest resources against damage by insects, diseases, and fire. Byram and Jemison (1943), for example, computed the amount of solar heat reaching the earth's surface and related solar radiation intensity to the moisture content of forest fuels in the southern Appalachian Mountains. Recently, Anderson (1956) applied data on solar radiation in studying the effects of forest cover in the Sierra Nevada snowpack. Data of this kind are also of concern to workers in many other fields, including the seasoning of timbers (MacLean, 1956), air conditioning (Hutchinson and Cotter, 1955), and solar heating (Brooks, 1959).

The intensity of incident solar radiation depends on two kinds of parameters (1) those that change from day to day (including clouds, fog, smog, dust, smoke, and water vapor in the air), and (2) those that depend on the geometry of the site with respect to the direction of the sun's rays. Parameters of the first kind, occurring more or less irregularly, impose on the solar radiation a fluctuating influence which can be taken into account only in a general way through acquaintance with the climate of a locality or by measurements under particular weather conditions. Parameters of the second kind, on the other hand, can be considered permanent and invariable and are amenable to mathematical calculation. They include aspect or exposure of the ground surface (e.g., north or south), slope of the ground surface, time of day, time of the year, and latitude.

The tables in this publication present data for estimating the direct beam solar radiation on areas of the earth's surface, for different aspects, slopes, and latitude, for various times of the day and year, and for several degrees of air transparency. The tables cover the latitudes of most of the continental United States--

from 30° North to 46° North. By slight modification they may be used for the 30° to 46° latitudes in the southern hemisphere.

Some of the radiation scattered out of the direct beam may be again scattered by particles in the air or reflected from clouds and then reach the ground. Such multiple scattering and reflection is neglected in this treatment. Direct beam radiation only is considered. 1/

THEORY

As solar radiation passes downward through the air it decreases in intensity. The decrease in intensity of a direct beam is adequately expressed for most purposes of land management by the following absorption law (see figure 1):

$$I' = I_o p^L \qquad (1)$$

where I_o = full radiation intensity at the top of the atmosphere

I' = radiation intensity at the earth's surface normal to the sun's rays

L = effective length of the path through the air

p = transmission coefficient for the atmosphere

p^L is the fraction of a direct beam of radiation that passes through distance L of the atmosphere.

The quantity L in equation (1) bears the following relation, neglecting atmospheric refraction, to the effective depth of the atmosphere, d, and the angle A between the plane of the earth's surface and the direction of the solar radiation (see figure 1).

$$L = \frac{d}{\sin A} \qquad (2)$$

Substituting for L in equation (1),

$$I' = I_o p^{d/\sin A} \qquad (3)$$

1/ A procedure for estimating the scattered radiation is given on page 420 of Smithsonian Meteorological Tables, Sixth Revised Edition, 1951. According to this reference, a rough approximation of the intensity of the scattered radiation that reaches the earth's surface is given by the quantity $1/2\ I_o\ (0.91 - p^{1/\sin A})$. (See the following theory for the significance of the symbols.) The values of this quantity may be added to the direct beam radiation, derived from the tables of this paper, to estimate the total radiation (direct plus scattered) reaching an area of the earth's surface.

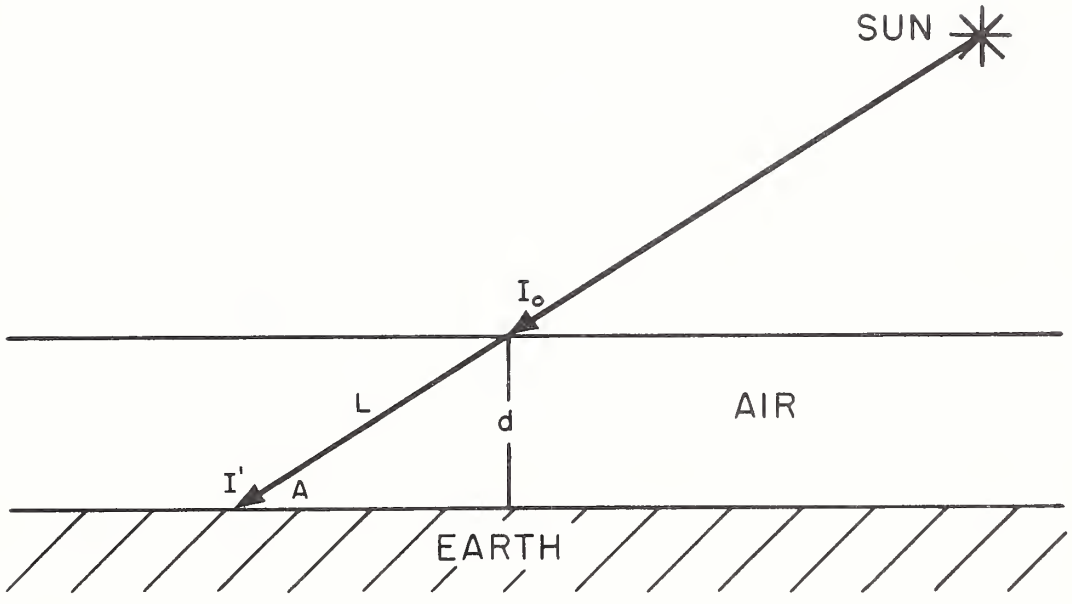


Figure 1.--Transmission of sunlight by the earth's atmosphere.

The density of the air in the atmosphere becomes less and less with increase in height, and the top of the atmosphere is indefinite. However, the effective depth of the atmosphere, d, may be expressed in terms of "unit atmosphere depths" with a value of 1.0, so that p is the fraction of the radiation, I_o, that reaches the earth vertically through the atmosphere, and equation (3) takes the form

$$I' = I_o p^{1/\sin A} \qquad (4)$$

After the radiation traverses the atmosphere, the intensity incident on any unit area of surface 2/ will depend on the tilt of the surface from the perpendicular to the direction of the radiation in accordance with Lambert's Cosine Law (see figure 2).

2/ In this paper the areas are not the horizontal projections as given on maps, but the actual areas of the sloping surfaces. The surface area on a slope equals the map area divided by the cosine of the degrees of slope from the horizontal.

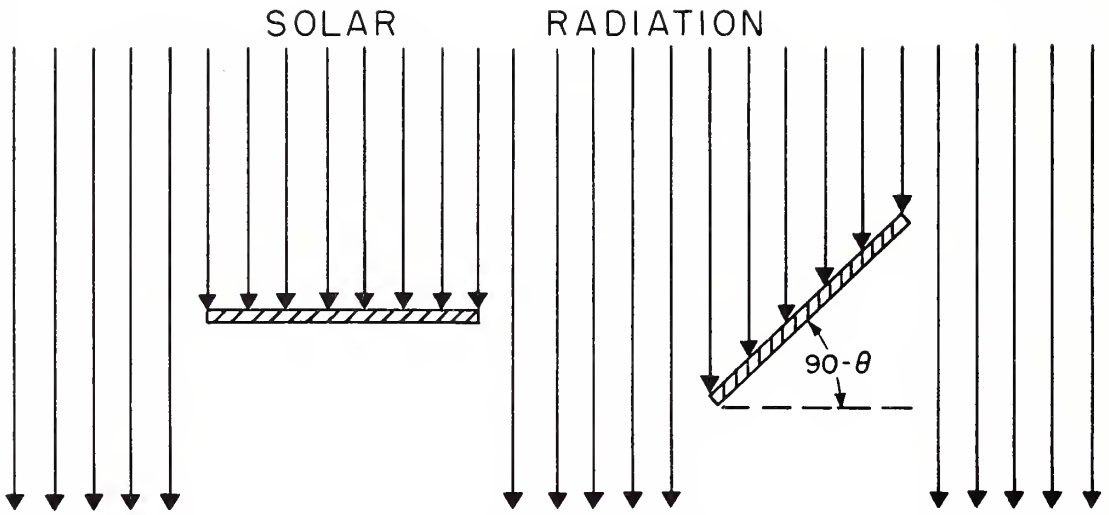


Figure 2.--Irradiation of sloping surfaces.

$$I = I' \cos (90 - \theta) = I' \sin \theta \qquad (5)$$

where I = intensity incident on a unit surface
θ = angle between surface and radiation.

Equations (4) and (5) can be combined to give

$$I = I_o p^{1/\sin A} \sin \theta \qquad (6)$$

The angle A (see figure 1) varies with the position of the sun north or south of the celestial equator, the latitude of the irradiated surface, and the time of day, in accordance with the equation

$$\sin A = \cos \delta \sin h \cos \Phi + \sin \Phi \sin \delta \qquad (7)$$

where A = angular altitude of the sun from the horizontal

δ = declination of the sun from the celestial equator

h = hour angle of the sun measured from 0600 solar time

Φ = latitude of the surface receiving the solar radiation.

Because the summer sun may be above the horizon at 0600 and 1800, it is often desirable to know the time of sunrise and sunset in order to make a complete plot of $\underline{I}$ versus $\underline{h}$ from sunup to sundown. The approximate time of sunrise and sunset for any day of the year may be determined by setting $A = 0°$ in equation (7) which then reduces to $\sin h = \tan \delta \tan \Phi$. Values for the approximate times of sunrise and sunset, taking into consideration the apparent displacement of the sun by refraction by the atmosphere, are given in table 1.

Table 2 gives the solar declination, $\underline{\delta}$, for selected times of the year.

The hour angle, h, can easily be calculated for any time of the day by setting $h = 0°$ at 0600 solar time, $h = 15°$ at 0700, $h = 30°$ at 0800, et cetera, increasing the hour angle 15 degrees for each hour. Solar time is calculated from clock (standard zone) time as follows:

(a) To the clock time add 4 minutes for each degree of longitude that the station is east of the standard meridian of the local time zone, or subtract 4 minutes for each degree west of the standard meridian, to get the local mean solar time.

(b) To the local mean solar time add algebraically the value of the correction shown in table 3. The sum is the solar time used in tables 4 to 13 of this paper.

The $\sin \theta$ term in equation (6) can be put in terms of more fundamental quantities by the relation

$$\sin \theta = \sin A \cos \alpha - \cos A \sin \alpha \sin (Z-\beta) \quad (8)$$

where α = slope of the plane surface from the vertical

Z = azimuth of the sun measured clockwise from the east

β = aspect angle, the angle measured clockwise between north and the projection of the normal to a horizontal plane. For a slope facing north, the aspect angle is 0°; for one facing south, 180°; for one facing southwest, 225°; for one facing northwest, 315°. (See figures 3 and 4.)

The values of $\sin \theta$ are given in tables 4 to 8 for the north latitudes of 30° to 46°, and declinations of +24 to -24 degrees.

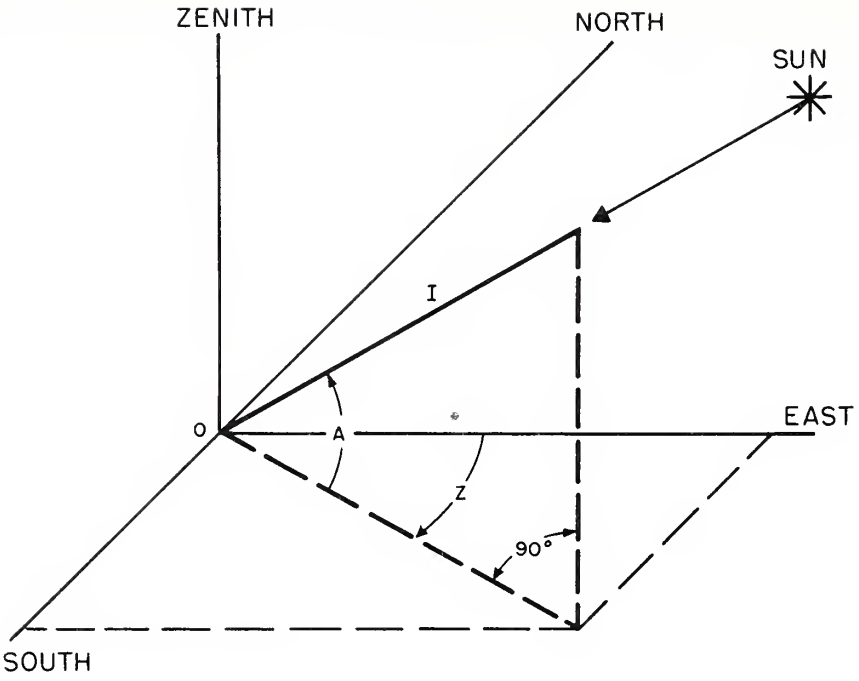


Figure 3.--Radiation on surface at Point O by the sun at angular altitude, A, and angular azimuth, Z, from the east.

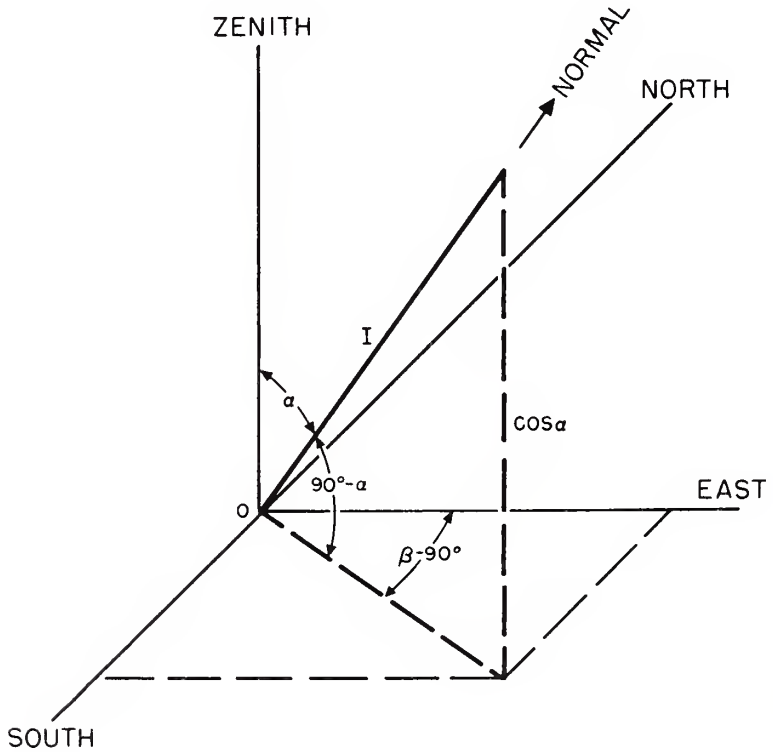


Figure 4.--Angular relations of a surface at Point O, sloping α degrees from the vertical, and with an aspect of β degrees measured clockwise from the north.

The value of p varies from time to time and place to place with the absorptive conditions of the atmosphere. If air were perfectly transparent to solar radiation, p would have a value of 1.0. Air, however, is never perfectly transparent and p always has a value less than 1.0. At high elevations on clear days, p may have a value as high as 0.9. Under conditions of urban smog, the value of p may be as low as 0.4. Values of $p^{1/\sin A}$ are given in tables 9 to 13 for values of p varying from 0.4 to 0.9.

APPLICATION

Values for I, the intensity of the direct beam solar radiation, can be calculated by equation (6) by multiplying three numbers--(a) 1.946 cal./cm^2 min., or 430.5 Btu/ft^2 hr., for I_o 3/; (b) values from tables 4 to 8 for sin θ ; and (c) values from tables 9 to 13, for $p^{1/\sin A}$.

In cases where relative values are wanted for the intensity of radiation on surfaces varying only as to slope or aspect, or both, (the latitude, season, time of day, and atmospheric transmission being the same for all the surfaces considered), the values of sin θ in tables 4 to 8 can be taken as the relative values of I.

Example 1.--Irradiation on a surface.

Given: Date, August 16; north latitude, 30°; exposure, southeast; slope, 30 percent; solar time, 1400; atmosphere transmission, 0.6.

Find: The direct beam solar irradiation at ground surface, expressed in cal./ cm^2 min.

Solution: Step 1.--From table 2, sun's declination on August 16 = 14°.

Step 2.--From table 4, for 30 percent slope, 14° declination, southeast exposure, and 1400 solar time, sin θ = 0.7571

Step 3.--From table 9, for 14° declination and 1400 solar time, $p^{1/\sin A}$ = 0.5478.

3/ The solar constant, I_o, is not strictly constant but was found to vary from 1.914 to 1.957 calories/ cm^2 min. with an average value of 1.946, for the years 1920 to 1952 (Forsythe 1954, p. 720).

Step 4.--From equation (6), $I = I_o \sin p^{1/\sin A}$,

$I = 1.946 \times 0.7571 \times 0.5478$,

$I = 0.8071$ cal./cm^2 min. (Answer)

(The surface receives direct radiation at the rate of 0.8071 calories per square centimeter per minute under the given conditions.)

Example 2.--Relative irradiation on two slopes at same location.

Given: Sun's declination, 22°; north latitude, 38°; exposure, southeast; solar time, 1200; (A), 30 percent slope; (B), 100 percent slope.

Find: The relative irradiation on two slopes.

Solution: Step 1.--From table 6, for 22° declination southeast exposure, 1200 solar time, (A), $\sin \theta$ = 0.9767 for 30 percent slope, and (B), $\sin \theta$ = 0.8175 for 100 percent slope.

Step 2.--0.9767 ÷ 0.8175 = 1.195 (Answer)

(The 30 percent slope receives 19.5 percent more direct radiation than the 100 percent slope under the given conditions.)

Example 3.--Relative radiation at two different latitudes.

Given: Slope, 50 percent; sun's declination, -8°; exposure, west; solar time, 1600; atmospheric transmission, 0.7; (A), north latitude, 30°; (B), north latitude, 46°.

Find: The relative amounts of radiation received by the surfaces at the different latitudes.

Solution: Step 1.--From table 4, for 50 percent slope, -8° declination, west exposure, and 1600 solar time, (A), $\sin \theta$ = 0.7048 for 30° latitude, and (B), $\sin \theta$ = 0.6016 for 46° latitude.

Step 2.--For -8° declination, 1600 solar time, and 0.7 transmission, from table 9, (A), $p^{1/\sin A}$ = 0.3705 for 30° latitude, and from table 13, (B), $p^{1/\sin A}$ = 0.2315 for 46° latitude.

Step 3.--$\frac{0.7048}{0.6016} \times \frac{0.3705}{0.2315} = 1.8750$ (Answer)

(A surface at 30° N. latitude will receive 87.5 percent more direct radiation than the surface at 46° N. latitude.)

To use these tables for the southern hemisphere:

(a) consider the south latitudes to be of + sign,

(b) reverse the sign of the declination in table 2 for the date under consideration, changing + to - and - to +,

(c) change the exposure as follows:

N	to	S
NE	to	SE
E	to	E
SE	to	NE
S	to	N
SW	to	NW
W	to	W
NW	to	SW

(d) after making these changes, use the tables as for a surface in the northern hemisphere.

Example: Given the conditions of column A for a surface in the southern hemisphere, change to those in column B.

A	B
40° S. latitude	40° N. latitude
June 1	December 3
Declination + 22°	Declination -22°
NW exposure	SW exposure

Look up in the tables the value of sin θ and $p^{1/\sin A}$ for the conditions in column B. These will be the values to use in calculating the solar radiation for the conditions listed in column A.

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Table 1.--Local mean time of visible sunrise and sunset

Approx. date	North latitude																			
	30°				34°				38°				42°				46°			
	R[1]		S[2]		R		S		R		S		R		S		R		S	
	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.	hr.	min.
Jan. 2	6	55	5	12	7	05	5	02	7	16	4	52	7	28	4	40	7	41	4	26
Jan. 16	6	56	5	23	7	05	5	15	7	14	5	05	7	25	4	55	7	37	4	42
Feb. 2	6	50	5	38	6	56	5	31	7	04	5	24	7	12	5	15	7	22	5	06
Feb. 15	6	40	5	48	6	45	5	43	6	51	5	38	6	57	5	32	7	04	5	25
Mar. 1	6	27	5	59	6	30	5	56	6	33	5	53	6	37	5	49	6	41	5	45
Mar. 16	6	09	6	09	6	09	6	08	6	10	6	07	6	11	6	07	6	11	6	06
Apr. 3	5	48	6	19	5	46	6	21	5	43	6	24	5	41	6	27	5	37	6	30
Apr. 16	5	32	6	28	5	28	6	32	5	23	6	36	5	18	6	41	5	12	6	47
May 1	5	17	6	37	5	11	6	43	5	04	6	51	4	56	6	58	4	47	7	07
May 16	5	06	6	46	4	58	6	55	4	49	7	04	4	39	7	14	4	26	7	26
June 1	4	59	6	56	4	50	7	06	4	38	7	17	4	27	7	29	4	12	7	43
June 22	4	59	7	05	4	49	7	15	4	37	7	27	4	24	7	40	4	08	7	55
July 19	5	10	7	01	5	01	7	11	4	51	7	21	4	39	7	32	4	25	7	46
Aug. 2	5	19	6	53	5	11	7	02	5	02	7	10	4	53	7	20	4	41	7	31
Aug. 16	5	27	6	42	5	21	6	48	5	14	6	54	5	07	7	02	4	59	7	10
Sept. 5	5	38	6	19	5	36	6	22	5	32	6	25	5	29	6	29	5	24	6	33
Sept. 16	5	44	6	06	5	43	6	08	5	41	6	09	5	40	6	11	5	38	6	13
Oct. 1	5	52	5	48	5	53	5	47	5	54	5	45	5	55	5	44	5	56	5	43
Oct. 14	6	00	5	32	6	03	5	29	6	06	5	26	6	10	5	22	6	14	5	18
Nov. 3	6	15	5	13	6	20	5	07	6	27	5	01	6	34	4	53	6	42	4	45
Nov. 14	6	23	5	06	6	30	4	59	6	38	4	51	6	47	4	42	6	57	4	32
Dec. 3	6	39	5	01	6	48	4	52	6	58	4	42	7	09	4	30	7	22	4	17
Dec. 22	6	51	5	05	7	01	4	55	7	12	4	44	7	24	4	32	7	38	4	18

1/ R: Sunrise
2/ S: Sunset
Source: Bowditch 1916, pp. 648-671, table 10.

Table 2.--Solar declination, δ, for selected dates

Solar declination δ	Date	Solar declination δ	Date
23° 27'	June 21	- 2	Mar. 16; Sept. 28
22	June 1; July 12	- 4	Mar. 11; Oct. 4
20	May 21; July 24	- 6	Mar. 6; Oct. 9
18	May 12; Aug. 2	- 8	Mar. 1; Oct. 14
16	May 5; Aug. 9	-10	Feb. 23; Oct. 19
14	Apr. 28; Aug. 16	-12	Feb. 18; Oct. 25
12	Apr. 22; Aug. 22	-14	Feb. 12; Oct. 31
10	Apr. 16; Aug. 28	-16	Feb. 5; Nov. 6
8	Apr. 11; Sept 2	-18	Jan. 29; Nov. 14
6	Apr. 5; Sept. 8	-20	Jan. 21; Nov. 22
4	Mar. 31; Sept. 13	-22	Jan. 10; Dec. 3
2	Mar. 26; Sept. 18	-23° 27'	Dec. 21
0	Mar. 21; Sept. 23		

Table 3.--Correction to be added algebraically to local mean solar time to obtain true solar time[1/]

Date	Correction Time (Min.)	Date	Correction Time (Min.)
Jan. 1	- 3	July 1	- 4
11	- 8	11	- 5
21	11	21	- 6
Feb. 1	-14	Aug. 1	- 6
11	-14	11	- 5
21	-14	21	- 3
Mar. 1	-13	Sept. 1	0
11	-10	11	+ 3
21	- 8	21	+ 7
Apr. 1	- 4	Oct. 1	+10
11	- 1	11	+13
21	+ 1	21	+15
May 1	+ 3	Nov. 1	+16
11	+ 4	11	+16
21	+ 4	21	+14
June 1	+ 2	Dec. 1	+11
11	+ 1	11	+ 7
21	- 1	21	+ 2

1/ Source: Forsythe 1954, p. 728.

Table 4.--Values of Sin θ[1/] for latitude 30°

Latitude: 30°
Slope: 0 percent

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2034	0.5990	0.8885	0.9945	0.8885	0.5990	0.2034
	22	.1873	.5888	.8827	.9903	.8827	.5888	.1873
	20	.1710	.5779	.8758	.9848	.8758	.5779	.1710
	18	.1545	.5663	.8678	.9781	.8678	.5663	.1545
	16	0.1378	0.5541	0.8588	0.9703	0.8588	0.5541	0.1378
	14	.1210	.5411	.8487	.9613	.8487	.5411	.1210
	12	.1040	.5275	.8376	.9511	.8376	.5275	.1040
	10	.0868	.5133	.8255	.9397	.8255	.5133	.0868
	8	0.0696	0.4984	0.8123	0.9272	0.8123	0.4984	0.0696
	6	.0523	.4829	.7982	.9135	.7982	.4829	.0523
	4	.0349	.4668	.7831	.8988	.7831	.4668	.0349
	2	.0175	.4502	.7670	.8829	.7670	.4502	.0175
	0	0.0000	0.4330	0.7500	0.8660	0.7500	0.4330	0.0000
Minus	2		0.4153	0.7321	0.8481	0.7321	0.4153	
	4		.3971	.7133	.8290	.7133	.3971	
	6		.3784	.6936	.8090	.6936	.3784	
	8		.3592	.6731	.7880	.6731	.3592	
	10		0.3396	0.6518	0.7660	0.6518	0.3396	
	12		.3196	.6297	.7431	.6297	.3196	
	14		.2992	.6068	.7193	.6068	.2992	
	16		.2784	.5831	.6947	.5831	.2784	
	18		0.2573	0.5588	0.6691	0.5588	0.2573	
	20		.2359	.5338	.6428	.5338	.2359	
	22		.2142	.5081	.6157	.5081	.2142	
	24		.1922	.4818	.5878	.4818	.1922	

1/ For zero slope Sin θ = Sin A.

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 10 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.2374	0.6083	0.8799	0.9792	0.8799	0.6083	0.2374
22	.2187	.5951	.8707	.9715	.8707	.5951	.2187
20	.1996	.5811	.8605	.9627	.8605	.5811	.1996
18	.1804	.5668	.8492	.9526	.8492	.5668	.1804
16	0.1609	0.5513	0.8369	0.9414	0.8369	0.5513	0.1609
14	.1412	.5352	.8235	.9291	.8235	.5352	.1412
12	.1213	.5185	.8092	.9156	.8092	.5185	.1213
10	.1014	.5012	.7939	.9010	.7939	.5012	.1014
8	0.0812	0.4833	0.7776	0.8853	0.7776	0.4833	0.0812
6	.0610	.4648	.7604	.8685	.7604	.4648	.0610
4	.0407	.4457	.7422	.8507	.7422	.4457	.0407
2	.0204	.4261	.7231	.8319	.7231	.4261	.0204
0	0.0000	0.4060	0.7032	0.8120	0.7032	0.4060	0.0000
Minus 2		0.3854	0.6824	0.7911	0.6824	0.3854	
4		.3643	.6608	.7693	.6608	.3643	
6		.3428	.6383	.7465	.6383	.3428	
8		.3208	.6151	.7228	.6151	.3208	
10		0.2985	0.5912	0.6983	0.5912	0.2985	
12		.2758	.5665	.6729	.5665	.2758	
14		.2527	.5411	.6467	.5411	.2527	
16		.2294	.5151	.6246	.5151	.2294	
18		0.2057	0.4884	0.5919	0.4884	0.2057	
20		.1819	.4612	.5634	.4612	.1819	
22		.1578	.4333	.5342	.4333	.1578	
24		.1335	.4050	.5044	.4050	.1335	

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 20 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.2685	0.6116	0.8629	0.9547	0.8629	0.6116	0.2685
22	.2473	.5955	.8505	.9437	.8505	.5955	.2473
20	.2258	.5787	.8371	.9316	.8371	.5787	.2258
18	.2040	.5612	.8227	.9184	.8227	.5612	.2040
16	0.1820	0.5433	0.8073	0.9040	0.8073	0.5433	0.1820
14	.1597	.5242	.7909	.8885	.7909	.5242	.1597
12	.1373	.5047	.7736	.8720	.7736	.5047	.1373
10	.1146	.4845	.7553	.8544	.7553	.4845	.1146
8	0.0919	0.4638	0.7361	0.8357	0.7361	0.4638	0.0919
6	.0690	.4425	.7160	.8160	.7160	.4425	.0690
4	.0461	.4207	.6950	.7954	.6950	.4207	.0461
2	.0231	.3984	.6732	.7737	.6732	.3984	.0231
0	0.0000	0.3756	0.6505	0.7511	0.6505	0.3756	0.0000
Minus 2		0.3523	0.6271	0.7277	0.6271	0.3523	
4		.3286	.6029	.7033	.6029	.3286	
6		.3045	.5779	.6780	.5779	.3045	
8		.2801	.5523	.6520	.5523	.2801	
10		0.2552	0.5260	0.6251	0.5260	0.2552	
12		.2301	.4991	.5975	.4991	.2301	
14		.2047	.4715	.5691	.4715	.2047	
16		.1791	.4434	.5401	.4434	.1791	
18		0.1532	0.4147	0.5104	0.4147	0.1532	
20		.1271	.3855	.4801	.3855	.1271	
22		.1009	.3559	.4491	.3559	.1009	
24		.0746	.3258	.4177	.3258	.0746	

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 30 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.2960	0.6093	0.8387	0.9226	0.8387	0.6093	0.2960
22	.2726	.5906	.8234	.9085	.8234	.5906	.2726
20	.2489	.5711	.8071	.8934	.8071	.5711	.2489
18	.2249	.5511	.7898	.8772	.7898	.5511	.2249
16	0.2006	0.5307	0.7715	0.8599	0.7715	0.5307	0.2006
14	.1761	.5089	.7524	.8415	.7524	.5089	.1761
12	.1513	.4868	.7323	.8222	.7323	.4868	.1513
10	.1264	.4641	.7113	.8018	.7113	.4641	.1264
8	0.1013	0.4409	0.6895	0.7805	0.6895	0.4409	0.1013
6	.0761	.4171	.6668	.7582	.6668	.4171	.0761
4	.0508	.3929	.6433	.7349	.6433	.3929	.0508
2	.0254	.3681	.6190	.7108	.6190	.3681	.0254
0	0.0000	0.3429	0.5940	0.6858	0.5940	0.3429	0.0000
Minus 2		0.3173	0.5682	0.6600	0.5682	0.3173	
4		.2913	.5417	.6334	.5417	.2913	
6		.2650	.5146	.6060	.5146	.2650	
8		.2383	.4869	.5779	.4869	.2383	
10		0.2113	0.4585	0.5490	0.4585	0.2113	
12		.1796	.4297	.5195	.4297	.1796	
14		.1567	.4003	.4894	.4003	.1567	
16		.1290	.3703	.4587	.3703	.1290	
18		0.1013	0.3400	0.4274	0.3400	0.1013	
20		.0733	.3092	.3956	.3092	.0733	
22		.0453	.2781	.3633	.2781	.0453	
24		.0173	.2466	.3305	.2466	.0173	

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 40 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3196	0.6021	0.8090	0.8846	0.8090	0.6021	0.3196
22	.2944	.5811	.7910	.8678	.7910	.5811	.2944
20	.2688	.5593	.7721	.8499	.7721	.5593	.2688
18	.2428	.5369	.7522	.8310	.7522	.5369	.2428
16	0.2166	0.5144	0.7314	0.8111	0.7314	0.5144	0.2166
14	.1901	.4902	.7098	.7901	.7098	.4902	.1901
12	.1634	.4659	.6873	.7683	.6873	.4659	.1634
10	.1365	.4410	.6639	.7455	.6639	.4410	.1365
8	0.1094	0.4156	0.6397	0.7218	0.6397	0.4156	0.1094
6	.0822	.3897	.6148	.6971	.6148	.3897	.0822
4	.0548	.3633	.5891	.6717	.5891	.3633	.0548
2	.0275	.3365	.5627	.6454	.5627	.3365	.0275
0	0.0000	0.3092	0.5356	0.6184	0.5356	0.3092	0.0000
Minus 2		0.2816	0.5078	0.5906	0.5078	0.2816	
4		.2536	.4794	.5621	.4794	.2536	
6		.2254	.4505	.5329	.4505	.2254	
8		.1968	.4210	.5030	.4210	.1968	
10		0.1680	0.3909	0.4725	0.3909	0.1680	
12		.1391	.3605	.4415	.3605	.1391	
14		.1099	.3295	.4099	.3295	.1099	
16		.0806	.2982	.3778	.2982	.0806	
18		0.0512	0.2665	0.3453	0.2665	0.0512	
20		.0218	.2345	.3123	.2345	.0218	
22		.0000	.2022	.2790	.2022	.0000	
24			.1696	.2453	.1696		

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 50 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3394	0.5911	0.7755	0.8428	0.7755	0.5911	0.3394
22	.3126	.5680	.7551	.8235	.7551	.5680	.3126
20	.2854	.5443	.7339	.8032	.7339	.5443	.2854
18	.2579	.5199	.7118	.7819	.7118	.5199	.2579
16	0.2300	0.4956	0.6887	0.7597	0.6887	0.4956	0.2300
14	.2019	.4693	.6649	.7365	.6649	.4693	.2019
12	.1735	.4431	.6403	.7125	.6403	.4431	.1735
10	.1449	.4163	.6149	.6875	.6149	.4163	.1449
8	0.1162	0.3890	0.5887	0.6618	0.5887	0.3890	0.1162
6	.0873	.3612	.5618	.6352	.5618	.3612	.0873
4	.0582	.3331	.5342	.6079	.5342	.3331	.0582
2	.0292	.3045	.5060	.5798	.5060	.3045	.0292
0	0.0000	0.2755	0.4772	0.5510	0.4772	0.2755	0.0000
Minus 2		0.2462	0.4478	0.5215	0.4478	0.2462	
4		.2166	.4178	.4914	.4178	.2166	
6		.1868	.3873	.4607	.3873	.1868	
8		.1567	.3564	.4295	.3564	.1567	
10		0.1264	0.3250	0.3977	0.3250	0.1264	
12		.0960	.2933	.3655	.2933	.0960	
14		.0654	.2611	.3327	.2611	.0654	
16		.0348	.2287	.2996	.2287	.0348	
18		0.0041	0.1960	0.2661	0.1960	0.0041	
20		.0000	.1630	.2323	.1630	.0000	
22			.1298	.1983	.1298		
24			.0965	.1639	.0965		

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 60 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3556	0.5773	0.7398	0.7991	0.7398	0.5773	0.3556
22	.3275	.5525	.7174	.7775	.7174	.5525	.3275
20	.2990	.5271	.6941	.7551	.6941	.5271	.2990
18	.2702	.5010	.6700	.7318	.6700	.5010	.2702
16	0.2410	0.4751	0.6451	0.7076	0.6451	0.4751	0.2410
14	.2115	.4471	.6194	.6825	.6194	.4471	.2115
12	.1818	.4193	.5930	.6565	.5930	.4193	.1818
10	.1518	.3909	.5658	.6298	.5658	.3909	.1518
8	0.1217	0.3621	0.5380	0.6023	0.5380	0.3621	0.1217
6	.0914	.3328	.5094	.5741	.5094	.3328	.0914
4	.0610	.3031	.4803	.5452	.4803	.3031	.0610
2	.0306	.2731	.4506	.5156	.4506	.2731	.0306
0	0.0000	0.2427	0.4203	0.4854	0.4203	0.2427	0.0000
Minus 2		0.2120	0.3896	0.4545	0.3896	0.2120	
4		.1811	.3583	.4232	.3583	.1811	
6		.1500	.3267	.3913	.3267	.1500	
8		.1187	.2946	.3590	.2946	.1187	
10		0.0872	0.2621	0.3262	0.2621	0.0872	
12		.0556	.2294	.2930	.2294	.0556	
14		.0240	.1963	.2594	.1963	.0240	
16		.0000	.1631	.2256	.1631	.0000	
18			0.1296	0.1914	0.1296		
20			.0960	.1571	.0960		
22			.0622	.1225	.0622		
24			.0284	.0878	.0284		

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 70 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3686	0.5617	0.7033	0.7549	0.7033	0.5617	0.3686
22	.3395	.5354	.6791	.7315	.6791	.5354	.3395
20	.3100	.5086	.6541	.7072	.6541	.5086	.3100
18	.2800	.4811	.6283	.6821	.6283	.4811	.2800
16	0.2498	0.4539	0.6017	0.6562	0.6017	0.4539	0.2498
14	.2192	.4245	.5745	.6294	.5745	.4245	.2192
12	.1884	.3953	.5466	.6019	.5466	.3953	.1884
10	.1573	.3664	.5180	.5737	.5180	.3664	.1573
8	0.1261	0.3355	0.4887	0.5448	0.4887	0.3355	0.1261
6	.0947	.3050	.4588	.5152	.4588	.3050	.0947
4	.0632	.2741	.4285	.4849	.4285	.2741	.0632
2	.0317	.2429	.3975	.4541	.3975	.2429	.0317
0	0.0000	0.2114	0.3661	0.4227	0.3661	0.2114	0.0000
Minus 2		0.1796	0.3343	0.3909	0.3343	0.1796	
4		.1477	.3020	.3585	.3020	.1477	
6		.1155	.2694	.3257	.2694	.1155	
8		.0832	.2364	.2925	.2364	.0832	
10		0.0508	0.2032	0.2589	0.2032	0.0508	
12		.0184	.1697	.2251	.1697	.0184	
14		.0000	.1360	.1909	.1360	.0000	
16			.1021	.1566	.1021		
18			0.0682	0.1220	0.0682		
20			.0341	.0873	.0341		
22			.0000	.0525	.0000		
24				.0176			

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 80 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3788	0.5450	0.6670	0.7113	0.6670	0.5450	0.3788
22	.3489	.5176	.6413	.6863	.6413	.5176	.3489
20	.3204	.4895	.6148	.6605	.6148	.4895	.3204
18	.2878	.4609	.5876	.6339	.5876	.4609	.2878
16	0.2567	0.4327	0.5597	0.6066	0.5597	0.4327	0.2567
14	.2253	.4021	.5312	.5784	.5312	.4021	.2253
12	.1937	.3718	.5020	.5496	.5020	.3718	.1937
10	.1617	.3411	.4722	.5201	.4722	.3411	.1617
8	0.1297	0.3099	0.4418	0.4900	0.4418	0.3099	0.1297
6	.0974	.2783	.4108	.4593	.4108	.2783	.0974
4	.0650	.2465	.3794	.4280	.3794	.2465	.0650
2	.0326	.2144	.3475	.3962	.3475	.2144	.0326
0	0.0000	0.1820	0.3152	0.3549	0.3152	0.1820	0.0000
Minus 2		0.1493	0.2825	0.3312	0.2825	0.1493	
4		.1165	.2494	.2980	.2494	.1165	
6		.0836	.2161	.2646	.2161	.0836	
8		.0506	.1825	.2307	.1825	.0506	
10		0.0175	0.1486	0.1966	0.1486	0.0175	
12		.0000	.1146	.1623	.1146	.0000	
14			.0805	.1278	.0805		
16			.0462	.0931	.0462		
18			0.0119	0.0583	0.0119		
20			.0000	.0234	.0000		
22				.0000			
24							

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 90 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3868	0.5280	0.6317	0.6701	0.6317	0.5280	0.3868
22	.3563	.4996	.6047	.6430	.6047	.4996	.3563
20	.3253	.4705	.5770	.6159	.5770	.4705	.3253
18	.2939	.4410	.5487	.5880	.5487	.4410	.2939
16	0.2621	0.4118	0.5196	0.5594	0.5196	0.4118	0.2621
14	.2301	.3803	.4899	.5301	.4899	.3803	.2301
12	.1977	.3491	.4597	.5002	.4597	.3491	.1977
10	.1651	.3175	.4289	.4697	.4289	.3175	.1651
8	0.1324	0.2855	0.3976	0.4386	0.3976	0.2855	0.1324
6	.0994	.2532	.3657	.4069	.3657	.2532	.0994
4	.0664	.2206	.3335	.3748	.3335	.2206	.0664
2	.0333	.1877	.3008	.3422	.3008	.1877	.0333
0	0.0000	0.1546	0.2678	0.3092	0.2678	0.1546	0.0000
Minus 2		0.1213	0.2346	0.2759	0.2346	0.1213	
4		.0879	.2008	.2421	.2008	.0879	
6		.0544	.1669	.2081	.1669	.0544	
8		.0208	.1329	.1739	.1329	.0208	
10		0.0000	0.0986	0.1394	0.0986	0.0000	
12			.0642	.1047	.0642		
14			.0298	.0700	.0298		
16			.0000	.0351	.0000		
18				0.0002			
20				.0000			
22							
24							

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 100 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3929	0.5110	0.5976	0.6294	0.5976	0.5110	0.3929
22	.3619	.4818	.5698	.6018	.5698	.4818	.3619
20	.3304	.4520	.5411	.5736	.5411	.4520	.3304
18	.2985	.4216	.5117	.5447	.5117	.4216	.2985
16	0.2663	0.3918	0.4817	0.5151	0.4817	0.3918	0.2663
14	.2337	.3594	.4512	.4848	.4512	.3594	.2337
12	.2008	.3276	.4201	.4540	.4201	.3276	.2008
10	.1677	.2953	.3885	.4226	.3885	.2953	.1677
8	0.1345	0.2627	0.3564	0.3907	0.3564	0.2627	0.1345
6	.1010	.2297	.3239	.3584	.3239	.2297	.1010
4	.0674	.1965	.2910	.3256	.2910	.1965	.0674
2	.0338	.1631	.2577	.2924	.2577	.1631	.0338
0	0.0000	0.1294	0.2241	0.2588	0.2241	0.1294	0.0000
Minus 2		0.0956	0.1903	0.2249	0.1903	0.0956	
4		.0617	.1562	.1908	.1562	.0617	
6		.0277	.1220	.1564	.1220	.0277	
8		.0000	.0875	.1219	.0875	.0000	
10			0.0530	0.0871	0.0530		
12			.0184	.0523	.0184		
14			.0000	.0175	.0000		
16				.0000			
18							
20							
22							
24							

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 10 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.2914	0.6604	0.9132	0.9823	0.8490	0.5490	0.1629
22	.2744	.6489	.9055	.9756	.8403	.5359	.1440
20	.2571	.6366	.8967	.9677	.8306	.5221	.1249
18	.2395	.6236	.8868	.9587	.8199	.5077	.1057
16	0.2216	0.6099	0.8758	0.9485	0.8082	0.4927	0.0863
14	.2034	.5952	.8638	.9371	.7955	.4770	.0668
12	.1849	.5800	.8507	.9246	.7819	.4608	.0473
10	.1663	.5640	.8366	.9110	.7673	.4440	.0277
8	0.1474	0.5473	0.8214	0.8962	0.7517	0.4267	0.0081
6	.1283	.5300	.8053	.8804	.7353	.4088	.0000
4	.1091	.5120	.7881	.8635	.7179	.3905	
2	.0908	.4934	.7700	.8455	.6997	.3716	
0	0.0704	0.4742	0.7510	0.8265	0.6807	0.3523	
Minus 2	0.0508	0.4544	0.7311	0.8065	0.6607	0.3327	
4	.0312	.4341	.7102	.7856	.6400	.3125	
6	.0116	.4132	.6885	.7637	.6185	.2920	
8	.0000	.3919	.6660	.7408	.5963	.2712	
10		0.3700	0.6426	0.7170	0.5733	0.2500	
12		.3477	.6185	.6924	.5497	.2285	
14		.3250	.5936	.6669	.5253	.2068	
16		.3019	.5680	.6456	.5003	.1848	
18		0.2784	0.5417	0.6135	0.4748	0.1625	
20		.2546	.5147	.5857	.4486	.1401	
22		.2305	.4871	.5572	.4219	.1175	
24		.2061	.4589	.5279	.3947	.0948	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 20 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3750	0.7142	0.9287	0.9607	0.8020	0.4948	0.1216
22	.3572	.7015	.9192	.9517	.7906	.4788	.1001
20	.3391	.6880	.9086	.9416	.7783	.4623	.0785
18	.3205	.6737	.8969	.9303	.7650	.4453	.0567
16	0.3015	0.6587	0.8841	0.9179	0.7508	0.4279	0.0349
14	.2822	.6426	.8703	.9044	.7357	.4095	.0131
12	.2626	.6259	.8554	.8897	.7197	.3909	.0000
10	.2426	.6083	.8394	.8740	.7029	.3718	
8	0.2223	0.5901	0.8225	0.8572	0.6851	0.3522	
6	.2017	.5711	.8045	.8394	.6665	.3322	
4	.1809	.5514	.7855	.8205	.6471	.3118	
2	.1599	.5310	.7656	.8007	.6270	.2910	
0	0.1387	0.5101	0.7447	0.7799	0.6061	0.2698	
Minus 2	0.1173	0.4884	0.7230	0.7581	0.5844	0.2484	
4	.0958	.4662	.7003	.7354	.5620	.2266	
6	.0741	.4434	.6769	.7118	.5389	.2045	
8	.0524	.4201	.6525	.6873	.5152	.1823	
10	0.0306	0.3963	0.6274	0.6620	0.4909	0.1597	
12	.0087	.3720	.6015	.6359	.4659	.1370	
14	.0000	.3472	.5749	.6090	.4404	.1141	
16		.3220	.5476	.5814	.4143	.0911	
18		0.2965	0.5197	0.5531	0.3878	0.0680	
20		.2705	.4911	.5241	.3607	.0448	
22		.2442	.4618	.4944	.3333	.0215	
24		.2177	.4321	.4642	.3054	.0000	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 30 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4520	0.7596	0.9351	0.9314	0.7495	0.4381	0.0807
22	.4337	.7459	.9241	.9202	.7357	.4196	.0569
20	.4149	.7313	.9119	.9080	.7209	.4006	.0331
18	.3956	.7159	.8986	.8947	.7053	.3812	.0091
16	0.3758	0.6999	0.8841	0.8802	0.6888	0.3615	0.0000
14	.3556	.6824	.8687	.8647	.6715	.3409	
12	.3349	.6643	.8522	.8482	.6534	.3201	
10	.3138	.6455	.8346	.8306	.6345	.2989	
8	0.2924	0.6258	0.8160	0.8120	0.6148	0.2773	
6	.2705	.6054	.7964	.7924	.5944	.2554	
4	.2484	.5845	.7759	.7718	.5732	.2332	
2	.2259	.5625	.7544	.7503	.5513	.2107	
0	0.2032	0.5399	0.7320	0.7279	0.5288	0.1880	
Minus 2	0.1802	0.5168	0.7087	0.7046	0.5056	0.1650	
4	.1570	.4929	.6845	.6804	.4818	.1419	
6	.1336	.4685	.6595	.6555	.4575	.1185	
8	.1101	.4435	.6337	.6297	.4325	.0950	
10	0.0864	0.4180	0.6071	0.6031	0.4070	0.0714	
12	.0626	.3951	.5798	.5758	.3811	.0382	
14	.0387	.3655	.5518	.5479	.3547	.0240	
16	.0148	.3385	.5231	.5192	.3278	.0002	
18	0.0000	0.3111	0.4938	0.4899	0.3006	0.0000	
20		.2834	.4639	.4600	.2729		
22		.2553	.4334	.4296	.2450		
24		.2269	.4023	.3986	.2167		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 40 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5212	0.7964	0.9337	0.8960	0.6937	0.3808	0.0414
22	.5026	.7819	.9211	.8829	.6777	.3601	.0156
20	.4833	.7664	.9075	.8688	.6607	.3389	.0000
18	.4635	.7500	.8928	.8536	.6430	.3174	
16	0.4431	0.7331	0.8770	0.8374	0.6215	0.2958	
14	.4221	.7145	.8601	.8201	.6053	.2731	
12	.4007	.6954	.8422	.8019	.5853	.2505	
10	.3787	.6754	.8233	.7827	.5646	.2275	
8	0.3563	0.6546	0.8033	0.7625	0.5432	0.2042	
6	.3335	.6330	.7823	.7414	.5212	.1807	
4	.3102	.6107	.7605	.7194	.4985	.1569	
2	.2866	.5876	.7377	.6965	.4752	.1331	
0	0.2626	0.5638	0.7140	0.6728	0.4513	0.1090	
Minus 2	0.2383	0.5394	0.6894	0.6482	0.4269	0.0848	
4	.2137	.5142	.6640	.6229	.4020	.0605	
6	.1889	.4884	.6377	.5968	.3766	.0361	
8	.1638	.4621	.6107	.5700	.3507	.0116	
10	0.1385	0.4352	0.5830	0.5424	0.3244	0.0000	
12	.1131	.4077	.5545	.5143	.2977		
14	.0875	.3797	.5254	.4855	.2706		
16	.0618	.3513	.4956	.4561	.2432		
18	0.0360	0.3225	0.4653	0.4261	0.2155		
20	.0102	.2933	.4343	.3957	.1876		
22	.0000	.2637	.4029	.3647	.1594		
24		.2338	.3709	.3333	.1310		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 50 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5822	0.8251	0.9256	0.8565	0.6367	0.3247	0.0044
22	.5633	.8098	.9118	.8417	.6186	.3020	.0000
20	.5438	.7936	.8969	.8259	.5998	.2789	
18	.5236	.7765	.8810	.8091	.5803	.2555	
16	0.5027	0.7588	0.8640	0.7914	0.5600	0.2323	
14	.4813	.7393	.8459	.7726	.5391	.2079	
12	.4592	.7194	.8268	.7529	.5175	.1837	
10	.4366	.6985	.8067	.7323	.4953	.1591	
8	0.4135	0.6768	0.7857	0.7109	0.4725	0.1344	
6	.3899	.6543	.7636	.6885	.4491	.1096	
4	.3658	.6310	.7406	.6653	.4252	.0846	
2	.3412	.6069	.7168	.6413	.4007	.0595	
0	0.3162	0.5821	0.6920	0.6165	0.3758	0.0344	
Minus 2	0.2908	0.5566	0.6665	0.5909	0.3504	0.0092	
4	.2651	.5304	.6400	.5647	.3246	.0000	
6	.2391	.5035	.6128	.5377	.2983		
8	.2128	.4761	.5849	.5101	.2718		
10	0.1862	0.4481	0.5563	0.4719	0.2449		
12	.1594	.4195	.5270	.4531	.2177		
14	.1324	.3904	.4970	.4237	.1902		
16	.1052	.3608	.4665	.3938	.1625		
18	0.0779	0.3308	0.4353	0.3635	0.1346		
20	.0505	.3004	.4037	.3327	.1065		
22	.0231	.2696	.3715	.3015	.0783		
24	.0000	.2385	.3389	.2699	.0500		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 60 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6349	0.8464	0.9125	0.8148	0.5801	0.2708	0.0000
22	.6159	.8307	.8976	.7985	.5603	.2464	
20	.5963	.8139	.8817	.7813	.5398	.2218	
18	.5758	.7961	.8647	.7631	.5187	.1969	
16	0.5547	0.7780	0.8467	0.7440	0.4970	0.1722	
14	.5329	.7578	.8276	.7240	.4746	.1464	
12	.5105	.7372	.8076	.7031	.4517	.1208	
10	.4874	.7156	.7866	.6813	.4283	.0951	
8	0.4638	0.6932	0.7645	0.6588	0.4043	0.0692	
6	.4396	.6699	.7416	.6354	.3798	.0433	
4	.4148	.6459	.7178	.6112	.3549	.0173	
2	.3896	.6210	.6931	.5863	.3295	.0000	
0	0.3638	0.5954	0.6675	0.5607	0.3037		
Minus 2	0.3376	0.5691	0.6412	0.5344	0.2775		
4	.3110	.5421	.6140	.5074	.2511		
6	.2841	.5144	.5861	.4799	.2243		
8	.2567	.4861	.5575	.4517	.1972		
10	0.2291	0.4572	0.5282	0.4230	0.1699		
12	.2012	.4278	.4983	.3938	.1424		
14	.1731	.3978	.4677	.3641	.1147		
16	.1447	.3673	.4366	.3340	.0869		
18	0.1161	0.3364	0.4050	0.3034	0.0590		
20	.0875	.3051	.3728	.2725	.0310		
22	.0587	.2734	.3403	.2412	.0029		
24	.0298	.2414	.3073	.2097	.0000		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 70 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6799	0.8617	0.8957	0.7724	0.5253	0.2200	0.0000
22	.6610	.8455	.8800	.7548	.5040	.1943	
20	.6413	.8283	.8631	.7364	.4821	.1683	
18	.6207	.8101	.8453	.7170	.4597	.1421	
16	0.5995	0.7915	0.8265	0.6968	0.4367	0.1163	
14	.5775	.7707	.8066	.6757	.4131	.0893	
12	.5548	.7496	.7858	.6538	.3891	.0626	
10	.5314	.7275	.7640	.6311	.3647	.0359	
8	0.5075	0.7046	0.7413	0.6077	0.3397	0.0091	
6	.4828	.6808	.7176	.5835	.3143	.0000	
4	.4576	.6561	.6931	.5586	.2886		
2	.4319	.6307	.6678	.5330	.2625		
0	0.4055	0.6046	0.6416	0.5067	0.2361		
Minus 2	0.3787	0.5776	0.6147	0.4799	0.2094		
4	.3514	.5500	.5870	.4524	.1824		
6	.3237	.5217	.5585	.4244	.1553		
8	.2957	.4928	.5295	.3959	.1279		
10	0.2673	0.4633	0.4997	0.3669	0.1004		
12	.2385	.4332	.4694	.3375	.0728		
14	.2094	.4025	.4385	.3076	.0450		
16	.1801	.3714	.4070	.2774	.0172		
18	0.1506	0.3399	0.3751	0.2468	0.0000		
20	.1208	.3079	.3427	.2160			
22	.0910	.2755	.3099	.1848			
24	.0610	.2429	.2767	.1555			

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 80 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7179	0.8718	0.8766	0.7305	0.4731	0.1729	0.0000
22	.6991	.8554	.8601	.7118	.4505	.1460	
20	.6813	.8378	.8426	.6923	.4275	.1189	
18	.6590	.8193	.8241	.6720	.4039	.0914	
16	0.6377	0.8004	0.8045	0.6508	0.3799	0.0649	
14	.6156	.7792	.7840	.6289	.3554	.0389	
12	.5928	.7577	.7625	.6061	.3305	.0094	
10	.5692	.7353	.7402	.5827	.3052	.0000	
8	0.5450	0.7119	0.7169	0.5585	0.2794		
6	.5201	.6877	.6927	.5337	.2534		
4	.4946	.6627	.6677	.5082	.2270		
2	.4685	.6369	.6419	.4821	.2004		
0	0.4417	0.6103	0.6153	0.4554	0.1735		
Minus 2	0.4144	0.5829	0.5879	0.4281	0.1464		
4	.3867	.5548	.5598	.4003	.1192		
6	.3585	.5261	.5311	.3721	.0918		
8	.3298	.4967	.5017	.3434	.0643		
10	0.3008	0.4668	0.4717	0.3143	0.0367		
12	.2714	.4362	.4411	.2847	.0090		
14	.2416	.4051	.4100	.2549	.0000		
16	.2115	.3735	.3783	.2247			
18	0.1813	0.3415	0.3463	0.1942			
20	.1507	.3091	.3138	.1636			
22	.1200	.2762	.2809	.1327			
24	.0891	.2431	.2477	.1016			

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 90 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7499	0.8780	0.8562	0.6905	0.4240	0.1295	0.0000
22	.7313	.8613	.8390	.6702	.4005	.1016	
20	.7117	.8435	.8209	.6499	.3764	.0736	
18	.6913	.8247	.8018	.6287	.3519	.0455	
16	0.6701	0.8056	0.7817	0.6068	0.3270	0.0180	
14	.6480	.7842	.7607	.5841	.3017	.0000	
12	.6251	.7624	.7388	.5607	.2761		
10	.6015	.7397	.7159	.5367	.2501		
8	0.5772	0.7161	0.6922	0.5120	0.2238		
6	.5521	.6916	.6676	.4866	.1972		
4	.5264	.6663	.6422	.4607	.1704		
2	.5001	.6402	.6161	.4342	.1433		
0	0.4730	0.6133	0.5892	0.4072	0.1161		
Minus 2	0.4454	0.5856	0.5616	0.3797	0.0888		
4	.4174	.5573	.5332	.3517	.0613		
6	.3887	.5282	.5043	.3233	.0338		
8	.3597	.4986	.4747	.2945	.0063		
10	0.3302	0.4683	0.4445	0.2653	0.0000		
12	.3003	.4375	.4139	.2359			
14	.2700	.4060	.3827	.2061			
16	.2393	.3741	.3510	.1761			
18	0.2085	0.3418	0.3189	0.1458			
20	.1773	.3091	.2864	.1154			
22	.1459	.2759	.2536	.0849			
24	.1144	.2425	.2205	.0542			

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 100 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7767	0.9110	0.8352	0.6510	0.3784	0.0898	0.0000
22	.7583	.8641	.8175	.6307	.3539	.0611	
20	.7389	.8462	.7989	.6095	.3291	.0324	
18	.7186	.8273	.7794	.5877	.3038	.0036	
16	0.6974	0.8080	0.7588	0.5652	0.2782	0.0000	
14	.6754	.7864	.7374	.5419	.2522		
12	.6526	.7645	.7151	.5180	.2260		
10	.6290	.7415	.6919	.4935	.1995		
8	0.6046	0.7177	0.6679	0.4683	0.1727		
6	.5795	.6931	.6430	.4426	.1457		
4	.5537	.6676	.6173	.4163	.1185		
2	.5272	.6413	.5909	.3896	.0912		
0	0.5000	0.6142	0.5638	0.3624	0.0638		
Minus 2	0.4722	0.5864	0.5361	0.3347	0.0363		
4	.4439	.5579	.5076	.3066	.0088		
6	.4150	.5286	.4785	.2782	.0000		
8	.3857	.4988	.4489	.2494			
10	0.3559	0.4683	0.4187	0.2203			
12	.3255	.4373	.3880	.1909			
14	.2949	.4057	.3568	.1613			
16	.2638	.3736	.3252	.1315			
18	0.2325	0.3411	0.2932	0.1016			
20	.2008	.3081	.2608	.0715			
22	.1689	.2748	.2281	.0413			
24	.1369	.2412	.1952	.0111			

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 10 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.2933	0.6747	0.9296	0.9896	0.8387	0.5173	0.1115
22	.2786	.6658	.9245	.9854	.8322	.5060	.0941
20	.2637	.6560	.9182	.9799	.8247	.4940	.0767
18	.2484	.6455	.9108	.9733	.8162	.4816	.0591
16	0.2328	0.6341	0.9023	0.9655	0.8067	0.4685	0.0415
14	.2169	.6220	.8927	.9565	.7962	.4548	.0238
12	.2008	.6092	.8821	.9463	.7848	.4406	.0061
10	.1844	.5956	.8703	.9350	.7724	.4259	.0000
8	0.1678	0.5813	0.8575	0.9226	0.7590	0.4106	
6	.1510	.5662	.8437	.9090	.7447	.3948	
4	.1340	.5505	.8288	.8943	.7295	.3786	
2	.1168	.5341	.8129	.8786	.7135	.3619	
0	0.0995	0.5170	0.7960	0.8617	0.6965	0.3447	
Minus 2	0.0821	0.4994	0.7782	0.8438	0.6787	0.3271	
4	.0645	.4811	.7594	.8249	.6601	.3091	
6	.0469	.4622	.7397	.8050	.6407	.2908	
8	.0293	.4428	.7190	.7841	.6205	.2721	
10	0.0116	0.4228	0.6975	0.7622	0.5996	0.2531	
12	.0000	.4023	.6752	.7395	.5779	.2337	
14		.3813	.6520	.7158	.5555	.2141	
16		.3599	.6281	.6962	.5324	.1942	
18		0.3380	0.6033	0.6658	0.5087	0.1741	
20		.3157	.5779	.6396	.4844	.1537	
22		.2930	.5517	.6126	.4594	.1332	
24		.2700	.5249	.5849	.4340	.1125	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 20 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3786	0.7425	0.9609	0.9752	0.7817	0.4322	0.0203
22	.3655	.7348	.9565	.9710	.7747	.4199	.0018
20	.3520	.7263	.9509	.9657	.7666	.4071	.0000
18	.3380	.7169	.9442	.9591	.7577	.3938	
16	0.3237	0.7066	0.9363	0.9515	0.7478	0.3800	
14	.3089	.6954	.9274	.9426	.7371	.3658	
12	.2938	.6834	.9172	.9326	.7254	.3511	
10	.2783	.6706	.9060	.9215	.7129	.3360	
8	0.2625	0.6569	0.8936	0.9092	0.6994	0.3205	
6	.2463	.6425	.8802	.8958	.6851	.3046	
4	.2298	.6272	.8657	.8813	.6700	.2883	
2	.2131	.6112	.8501	.8658	.6541	.2717	
0	0.1961	0.5945	0.8335	0.8492	0.6374	0.2548	
Minus 2	0.1789	0.5770	0.8159	0.8316	0.6199	0.2375	
4	.1614	.5588	.7973	.8129	.6016	.2199	
6	.1438	.5399	.7777	.7933	.5826	.2021	
8	.1260	.5204	.7571	.7727	.5629	.1841	
10	0.1080	0.5003	0.7357	0.7512	0.5426	0.1657	
12	.0899	.4795	.7133	.7287	.5215	.1473	
14	.0717	.4582	.6901	.7054	.4998	.1286	
16	.0534	.4363	.6661	.6812	.4775	.1097	
18	0.0350	0.4139	0.6412	0.6561	0.4547	0.0908	
20	.0166	.3909	.6155	.6303	.4313	.0717	
22	.0000	.3675	.5891	.6037	.4073	.0525	
24		.3437	.5620	.5764	.3829	.0333	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 30 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4573	0.8010	0.9823	0.9526	0.7198	0.3464	0.0000
22	.4458	.7947	.9787	.9485	.7123	.3332	
20	.4338	.7874	.9739	.9433	.7039	.3197	
18	.4213	.7791	.9679	.9369	.6946	.3058	
16	0.4082	0.7699	0.9607	0.9294	0.6845	0.2915	
14	.3947	.7598	.9523	.9207	.6735	.2768	
12	.3807	.7487	.9428	.9109	.6617	.2619	
10	.3661	.7367	.9321	.9001	.6491	.2466	
8	0.3512	0.7238	0.9203	0.8881	0.6358	0.2309	
6	.3359	.7100	.9074	.8750	.6216	.2151	
4	.3201	.6954	.8934	.8609	.6067	.1989	
2	.3039	.6799	.8783	.8457	.5911	.1825	
0	0.2873	0.6636	0.8621	0.8295	0.5747	0.1659	
Minus 2	0.2705	0.6465	0.8448	0.8123	0.5576	0.1491	
4	.2532	.6286	.8265	.7941	.5399	.1321	
6	.2357	.6099	.8073	.7749	.5215	.1149	
8	.2179	.5905	.7870	.7548	.5025	.0976	
10	0.1998	0.5704	0.7658	0.7337	0.4828	0.0802	
12	.1815	.5585	.7436	.7118	.4626	.0538	
14	.1629	.5280	.7206	.6890	.4418	.0451	
16	.1442	.5059	.6967	.6654	.4204	.0275	
18	0.1253	0.4831	0.6719	0.6409	0.3986	0.0098	
20	.1062	.4598	.6463	.6157	.3763	.0000	
22	.0870	.4359	.6199	.5897	.3535		
24	.0677	.4115	.5927	.5630	.3302		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 40 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5281	0.8499	0.9946	0.9234	0.6553	0.2623	0.0000
22	.5183	.8449	.9917	.9195	.6474	.2485	
20	.5078	.8388	.9877	.9144	.6387	.2343	
18	.4967	.8317	.9824	.9082	.6291	.2199	
16	0.4850	0.8236	0.9759	0.9009	0.6188	0.2053	
14	.4727	.8145	.9682	.8925	.6078	.1903	
12	.4598	.8044	.9593	.8830	.5960	.1752	
10	.4464	.7933	.9493	.8725	.5835	.1598	
8	0.4324	0.7813	0.9381	0.8609	0.5703	0.1442	
6	.4179	.7683	.9257	.8482	.5564	.1285	
4	.4029	.7543	.9123	.8345	.5418	.1126	
2	.3874	.7395	.8977	.8198	.5266	.0966	
0	0.3714	0.7237	0.8821	0.8041	0.5107	0.0804	
Minus 2	0.3550	0.7071	0.8653	0.7874	0.4942	0.0642	
4	.3381	.6895	.8475	.7697	.4770	.0478	
6	.3208	.6712	.8287	.7512	.4593	.0315	
8	.3032	.6520	.8089	.7317	.4411	.0150	
10	0.2851	0.6321	0.7880	0.7113	0.4223	0.0000	
12	.2668	.6113	.7663	.6900	.4030		
14	.2480	.5899	.7435	.6679	.3832		
16	.2291	.5677	.7199	.6450	.3629		
18	0.2097	0.5448	0.6954	0.6213	0.3422		
20	.1902	.5213	.6701	.5968	.3211		
22	.1704	.4971	.6439	.5716	.2996		
24	.1505	.4723	.6170	.5457	.2777		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 50 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5905	0.8895	0.9990	0.8895	0.5905	0.1819	0.0000
22	.5822	.8857	.9968	.8857	.5822	.1675	
20	.5732	.8808	.9935	.8808	.5732	.1530	
18	.5635	.8749	.9889	.8749	.5635	.1382	
16	0.5531	0.8679	0.9831	0.8679	0.5532	0.1233	
14	.5421	.8598	.9761	.8598	.5421	.1082	
12	.5304	.8507	.9679	.8507	.5304	.0930	
10	.5181	.8405	.9585	.8405	.5181	.0777	
8	0.5051	0.8293	0.9480	0.8293	0.5051	0.0623	
6	.4915	.8171	.9363	.8171	.4915	.0467	
4	.4773	.8039	.9235	.8039	.4773	.0312	
2	.4625	.7897	.9095	.7897	.4626	.0156	
0	0.4472	0.7746	0.8944	0.7746	0.4472	0.0000	
Minus 2	0.4313	0.7585	0.8783	0.7585	0.4313		
4	.4149	.7415	.8611	.7415	.4149		
6	.3980	.7236	.8428	.7236	.3980		
8	.3806	.7048	.8235	.7048	.3806		
10	0.3628	0.6852	0.8032	0.6852	0.3628		
12	.3445	.6647	.7819	.6647	.3445		
14	.3257	.6434	.7597	.6434	.3257		
16	.3066	.6213	.7365	.6213	.3066		
18	0.2871	0.5985	0.7125	0.5985	0.2871		
20	.2673	.5749	.6875	.5749	.2673		
22	.2471	.5507	.6618	.5507	.2471		
24	.2267	.5257	.6352	.5257	.2267		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 60 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6444	0.9206	0.9969	0.8528	0.5269	0.1066	0.0000
22	.6376	.9180	.9954	.8491	.5184	.0918	
20	.6301	.9143	.9927	.8445	.5093	.0769	
18	.6218	.9094	.9888	.8387	.4995	.0619	
16	0.6127	0.9034	0.9837	0.8320	0.4891	0.0468	
14	.6029	.8963	.9773	.8243	.4781	.0317	
12	.5924	.8882	.9699	.8155	.4666	.0165	
10	.5811	.8789	.9612	.8058	.4545	.0013	
8	0.5691	0.8686	0.9513	0.7951	0.4418	0.0000	
6	.5565	.8572	.9402	.7834	.4286		
4	.5431	.8448	.9281	.7707	.4149		
2	.5291	.8313	.9148	.7571	.4006		
0	0.5145	0.8169	0.9004	0.7426	0.3859		
Minus 2	0.4992	0.8014	0.8849	0.7272	0.3707		
4	.4833	.7850	.8683	.7109	.3550		
6	.4669	.7676	.8506	.6937	.3389		
8	.4498	.7493	.8319	.6757	.3225		
10	0.4322	0.7300	0.8122	0.6569	0.3056		
12	.4141	.7099	.7915	.6372	.2883		
14	.3955	.6889	.7699	.6168	.2707		
16	.3764	.6670	.7473	.5957	.2527		
18	0.3568	0.6444	0.7238	0.5738	0.2345		
20	.3368	.6210	.6994	.5512	.2160		
22	.3164	.5968	.6742	.5279	.1972		
24	.2956	.5719	.6481	.5040	.1781		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 70 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6905	0.9444	0.9899	0.8147	0.4660	0.0370	0.0000
22	.6851	.9428	.9890	.8113	.4573	.0219	
20	.6790	.9401	.9869	.8068	.4480	.0068	
18	.6720	.9363	.9836	.8013	.4382	.0000	
16	0.6642	0.9313	0.9791	0.7949	0.4279		
14	.6555	.9252	.9735	.7875	.4171		
12	.6461	.9179	.9666	.7791	.4057		
10	.6359	.9096	.9586	.7698	.3939		
8	0.6249	0.9001	0.9494	0.7596	0.3815		
6	.6131	.8895	.9390	.7484	.3687		
4	.6006	.8779	.9275	.7363	.3555		
2	.5874	.8651	.9149	.7233	.3418		
0	0.5735	0.8514	0.9012	0.7095	0.3277		
Minus 2	0.5588	0.8366	0.8863	0.6947	0.3132		
4	.5435	.8207	.8704	.6792	.2983		
6	.5275	.8039	.8534	.6628	.2831		
8	.5109	.7861	.8354	.6456	.2675		
10	0.4936	0.7673	0.8163	0.6276	0.2516		
12	.4758	.7476	.7963	.6088	.2354		
14	.4573	.7270	.7753	.5893	.2189		
16	.4383	.7055	.7533	.5691	.2021		
18	0.4188	0.6831	0.7305	0.5482	0.1851		
20	.3988	.6599	.7067	.5266	.1678		
22	.3783	.6359	.6821	.5044	.1504		
24	.3573	.6112	.6367	.4815	.1328		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 80 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7295	0.9619	0.9792	0.7766	0.4085	0.0000	0.0000
22	.7255	.9614	.9789	.7733	.3997		
20	.7224	.9596	.9774	.7690	.3904		
18	.7148	.9567	.9747	.7638	.3806		
16	0.7081	0.9527	0.9708	0.7577	0.3703		
14	.7006	.9475	.9658	.7506	.3597		
12	.6922	.9411	.9596	.7427	.3485		
10	.6830	.9336	.9522	.7338	.3370		
8	0.6729	0.9249	0.9436	0.7240	0.3250		
6	.6621	.9151	.9339	.7134	.3126		
4	.6504	.9042	.9231	.7018	.2999		
2	.6379	.8922	.9111	.6895	.2868		
0	0.6247	0.8791	0.8980	0.6763	0.2733		
Minus 2	0.6107	0.8650	0.8838	0.6622	0.2595		
4	.5959	.8497	.8686	.6474	.2454		
6	.5804	.8335	.8523	.6317	.2310		
8	.5643	.8162	.8349	.6153	.2163		
10	0.5474	0.7980	0.8166	0.5982	0.2014		
12	.5299	.7788	.7972	.5803	.1862		
14	.5117	.7586	.7769	.5617	.1707		
16	.4929	.7375	.7556	.5424	.1551		
18	0.4735	0.7155	0.7334	0.5225	0.1393		
20	.4535	.6926	.7103	.5019	.1233		
22	.4329	.6689	.6863	.4807	.1071		
24	.4119	.6443	.6616	.4590	.0909		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 90 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7623	0.9745	0.9660	0.7399	0.3549	0.0000	0.0000
22	.7595	.9748	.9662	.7361	.3463		
20	.7557	.9739	.9653	.7320	.3367		
18	.7511	.9719	.9631	.7271	.3269		
16	0.7455	0.9687	0.9598	0.7212	0.3168		
14	.7390	.9643	.9554	.7145	.3063		
12	.7316	.9588	.9494	.7069	.2954		
10	.7233	.9520	.9429	.6985	.2841		
8	0.7142	0.9442	0.9350	0.6892	0.2725		
6	.7041	.9351	.9259	.6790	.2606		
4	.6897	.9249	.9157	.6681	.2484		
2	.6815	.9136	.9044	.6563	.2358		
0	0.6690	0.9012	0.8919	0.6437	0.2230		
Minus 2	0.6556	0.8877	0.8784	0.6303	0.2099		
4	.6378	.8731	.8639	.6162	.1965		
6	.6264	.8574	.8482	.6013	.1829		
8	.6107	.8407	.8315	.5857	.1691		
10	0.5943	0.8230	0.8139	0.5694	0.1551		
12	.5771	.8044	.7952	.5524	.1409		
14	.5592	.7845	.7755	.5347	.1265		
16	.5406	.7639	.7549	.5163	.1119		
18	0.5214	0.7423	0.7335	0.4974	0.0972		
20	.5015	.7197	.7111	.4778	.0824		
22	.4810	.6963	.6878	.4576	.0675		
24	.4600	.6721	.6637	.4369	.0525		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 100 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7898	0.9830	0.9513	0.7032	0.3053	0.0000	0.0000
22	.7881	.9841	.9520	.7002	.2964		
20	.7854	.9841	.9515	.6964	.2871		
18	.7818	.9829	.9499	.6917	.2774		
16	0.7772	0.9804	0.9471	0.6861	0.2674		
14	.7716	.9768	.9432	.6797	.2571		
12	.7652	.9720	.9381	.6725	.2464		
10	.7578	.9660	.9319	.6645	.2355		
8	0.7494	0.9588	0.9245	0.6556	0.2243		
6	.7402	.9505	.9160	.6460	.2128		
4	.7301	.9410	.9064	.6355	.2010		
2	.7190	.9303	.8957	.6243	.1890		
0	0.7071	0.9186	0.8839	0.6124	0.1768		
Minus 2	0.6943	0.9057	0.8710	0.5997	0.1643		
4	.6807	.8917	.8571	.5862	.1517		
6	.6663	.8766	.8421	.5721	.1389		
8	.6510	.8604	.8261	.5572	.1259		
10	0.6450	0.8432	0.8091	0.5417	0.1127		
12	.6181	.8250	.7911	.5255	.0994		
14	.6006	.8057	.7721	.5087	.0860		
16	.5823	.7855	.7522	.4912	.0725		
18	0.5633	0.7644	0.7314	0.4731	0.0589		
20	.5435	.7423	.7097	.4545	.0452		
22	.5232	.7192	.6871	.4353	.0315		
24	.5022	.6954	.6637	.4156	.0177		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 10 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.2419	0.6429	0.9193	0.9969	0.8550	0.5316	0.1133
22	.2288	.6359	.9164	.9951	.8511	.5229	.0983
20	.2154	.6280	.9123	.9921	.8462	.5135	.0832
18	.2018	.6194	.9071	.9879	.8402	.5035	.0680
16	0.1880	0.6099	0.9008	0.9825	0.8332	0.4927	0.0527
14	.1739	.5999	.8934	.9759	.8252	.4816	.0373
12	.1596	.5890	.8850	.9681	.8161	.4698	.0219
10	.1451	.5775	.8754	.9591	.8061	.4575	.0065
8	0.1304	0.5652	0.8648	0.9489	0.7951	0.4445	0.0000
6	.1156	.5522	.8531	.9376	.7831	.4310	
4	.1006	.5386	.8404	.9252	.7702	.4170	
2	.0855	.5243	.8267	.9116	.7564	.4025	
0	0.0704	0.5094	0.8119	0.8969	0.7416	0.3875	
Minus 2	0.0551	0.4939	0.7962	0.8811	0.7259	0.3721	
4	.0397	.4777	.7795	.8643	.7093	.3561	
6	.0243	.4610	.7618	.8464	.6919	.3398	
8	.0089	.4437	.7433	.8274	.6736	.3230	
10	0.0000	0.4258	0.7238	0.8075	0.6545	0.3058	
12		.4075	.7034	.7865	.6346	.2883	
14		.3886	.6822	.7647	.6139	.2704	
16		.3693	.6601	.7468	.5925	.2522	
18		0.3495	0.6373	0.7181	0.5704	0.2336	
20		.3293	.6136	.6935	.5475	.2148	
22		.3087	.5893	.6680	.5240	.1957	
24		.2878	.5642	.6418	.4999	.1765	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 20 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.2773	0.6799	0.9406	0.9897	0.8139	0.4605	0.0239
22	.2673	.6759	.9405	.9903	.8119	.4532	.0101
20	.2569	.6711	.9393	.9898	.8090	.4453	.0000
18	.2463	.6654	.9369	.9880	.8050	.4370	
16	0.2353	0.6587	0.9333	0.9850	0.8001	0.4279	
14	.2241	.6517	.9287	.9808	.7941	.4186	
12	.2126	.6437	.9229	.9754	.7872	.4087	
10	.2009	.6348	.9160	.9689	.7794	.3983	
8	0.1889	0.6253	0.9079	0.9611	0.7706	0.3874	
6	.1766	.6149	.8988	.9522	.7609	.3760	
4	.1642	.6038	.8885	.9421	.7502	.3642	
2	.1515	.5919	.8772	.9309	.7386	.3519	
0	0.1387	0.5794	0.8648	0.9185	0.7261	0.3392	
Minus 2	0.1257	0.5661	0.8514	0.9051	0.7128	0.3261	
4	.1125	.5521	.8369	.8905	.6986	.3125	
6	.0992	.5375	.8214	.8748	.6835	.2986	
8	.0858	.5222	.8049	.8581	.6676	.2843	
10	0.0723	0.5063	0.7874	0.8403	0.6508	0.2697	
12	.0587	.4897	.7690	.8215	.6333	.2548	
14	.0450	.4726	.7496	.8017	.6150	.2395	
16	.0313	.4549	.7293	.7809	.5960	.2240	
18	0.0175	0.4366	0.7081	0.7592	0.5762	0.2082	
20	.0037	.4178	.6861	.7365	.5557	.1921	
22	.0000	.3985	.6632	.7130	.5346	.1758	
24		.3787	.6395	.6886	.5128	.1593	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 30 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3088	0.7093	0.9526	0.9738	0.7670	0.3878	0.0000
22	.3019	.7083	.9553	.9768	.7669	.3820	
20	.2945	.7065	.9568	.9785	.7659	.3757	
18	.2869	.7037	.9571	.9791	.7639	.3690	
16	0.2788	0.6999	0.9563	0.9785	0.7610	0.3615	
14	.2704	.6957	.9543	.9767	.7571	.3542	
12	.2617	.6904	.9511	.9737	.7523	.3462	
10	.2527	.6844	.9468	.9696	.7467	.3378	
8	0.2434	0.6774	0.9413	0.9642	0.7401	0.3289	
6	.2337	.6697	.9346	.9577	.7326	.3197	
4	.2238	.6611	.9269	.9500	.7242	.3100	
2	.2136	.6517	.9180	.9411	.7149	.3000	
0	0.2032	0.6415	0.9079	0.9311	0.7048	0.2896	
Minus 2	0.1925	0.6306	0.8968	0.9200	0.6937	0.2788	
4	.1816	.6188	.8846	.9077	.6819	.2677	
6	.1704	.6063	.8713	.8943	.6692	.2563	
8	.1591	.5931	.8569	.8799	.6557	.2446	
10	0.1475	0.5792	0.8416	0.8643	0.6415	0.2326	
12	.1357	.5740	.8251	.8478	.6264	.2171	
14	.1239	.5492	.8077	.8302	.6105	.2077	
16	.1118	.5332	.7894	.8115	.5940	.1949	
18	0.0996	0.5165	0.7699	0.7919	0.5767	0.1818	
20	.0873	.4992	.7496	.7713	.5587	.1685	
22	.0749	.4813	.7303	.7498	.5400	.1550	
24	.0624	.4628	.7062	.7274	.5206	.1368	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 40 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3362	0.7314	0.9562	0.9508	0.7163	0.3159	0.0000
22	.3322	.7332	.9615	.9560	.7180	.3115	
20	.3278	.7342	.9656	.9600	.7188	.3068	
18	.3229	.7343	.9685	.9628	.7187	.3017	
16	0.3177	0.7331	0.9702	0.9644	0.7177	0.2958	
14	.3121	.7317	.9707	.9649	.7159	.2903	
12	.3061	.7291	.9700	.9642	.7132	.2842	
10	.2998	.7257	.9682	.9623	.7096	.2777	
8	0.2930	0.7213	0.9652	0.9593	0.7051	0.2709	
6	.2859	.7161	.9610	.9550	.6998	.2637	
4	.2785	.7099	.9556	.9496	.6936	.2562	
2	.2707	.6930	.9491	.9431	.6866	.2484	
0	0.2626	0.6951	0.9414	0.9354	0.6788	0.2403	
Minus 2	0.2542	0.6865	0.9325	0.9266	0.6701	0.2319	
4	.2455	.6769	.9226	.9166	.6606	.2232	
6	.2364	.6666	.9115	.9055	.6503	.2142	
8	.2271	.6554	.8993	.8933	.6392	.2050	
10	0.2175	0.6434	0.8860	0.8801	0.6273	0.1955	
12	.2076	.6307	.8716	.8657	.6147	.1858	
14	.1975	.6172	.8561	.8503	.6013	.1758	
16	.1872	.6029	.8396	.8339	.5872	.1657	
18	0.1766	0.5879	0.8221	0.8164	0.5724	0.1553	
20	.1658	.5722	.8036	.7980	.5568	.1448	
22	.1548	.5558	.7841	.7786	.5406	.1341	
24	.1436	.5387	.7637	.7582	.5238	.1232	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 50 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3594	0.7468	0.9528	0.9226	0.6639	0.2464	0.0000
22	.3581	.7513	.9604	.9297	.6672	.2434	
20	.3565	.7549	.9669	.9357	.6697	.2402	
18	.3543	.7575	.9721	.9406	.6714	.2366	
16	0.3517	0.7588	0.9762	0.9444	0.6723	0.2323	
14	.3488	.7601	.9791	.9469	.6723	.2286	
12	.3454	.7600	.9808	.9484	.6715	.2243	
10	.3415	.7590	.9813	.9487	.6699	.2196	
8	0.3373	0.7571	0.9806	0.9478	0.6674	0.2147	
6	.3326	.7543	.9787	.9457	.6642	.2096	
4	.3275	.7505	.9756	.9425	.6601	.2041	
2	.3221	.7458	.9713	.9382	.6553	.1984	
0	0.3162	0.7402	0.9659	0.9327	0.6496	0.1925	
Minus 2	0.3100	0.7337	0.9592	0.9261	0.6432	0.1863	
4	.3034	.7263	.9514	.9183	.6360	.1799	
6	.2964	.7180	.9425	.9095	.6280	.1733	
8	.2890	.7089	.9323	.8995	.6192	.1665	
10	0.2813	0.6989	0.9211	0.8884	0.6097	0.1595	
12	.2733	.6880	.9087	.8763	.5994	.1522	
14	.2649	.6763	.8952	.8631	.5884	.1448	
16	.2562	.6638	.8807	.8488	.5767	.1373	
18	0.2472	0.6504	0.8650	0.8335	0.5643	0.1295	
20	.2379	.6363	.8483	.8172	.5512	.1216	
22	.2282	.6214	.8306	.7999	.5374	.1135	
24	.2184	.6057	.8119	.7816	.5230	.1053	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 60 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3786	0.7564	0.9437	0.8908	0.6114	0.1808	0.0000
22	.3799	.7633	.9535	.8998	.6162	.1791	
20	.3807	.7693	.9621	.9076	.6203	.1772	
18	.3811	.7744	.9696	.9144	.6236	.1751	
16	0.3810	0.7780	0.9758	0.9200	0.6261	0.1722	
14	.3805	.7816	.9809	.9245	.6279	.1702	
12	.3795	.7839	.9847	.9279	.6289	.1675	
10	.3780	.7852	.9873	.9302	.6291	.1647	
8	0.3761	0.7856	0.9888	0.9313	0.6285	0.1616	
6	.3737	.7849	.9890	.9313	.6272	.1583	
4	.3708	.7833	.9881	.9302	.6252	.1547	
2	.3675	.7808	.9859	.9279	.6223	.1511	
0	0.3638	0.7773	0.9826	0.9245	0.6188	0.1472	
Minus 2	0.3597	0.7729	0.9780	0.9200	0.6144	0.1431	
4	.3550	.7675	.9722	.9143	.6093	.1389	
6	.3499	.7612	.9653	.9076	.6035	.1345	
8	.3445	.7540	.9572	.8997	.5969	.1299	
10	0.3385	0.7458	0.9479	0.8907	0.5896	0.1252	
12	.3322	.7367	.9375	.8807	.5816	.1203	
14	.3255	.7267	.9259	.8695	.5729	.1153	
16	.3184	.7159	.9131	.8573	.5635	.1101	
18	0.3109	0.7041	0.8993	0.8441	0.5533	0.1048	
20	.3030	.6915	.8844	.8299	.5426	.0994	
22	.2947	.6781	.8684	.8146	.5311	.0939	
24	.2861	.6639	.8514	.7983	.5190	.0882	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 70 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3942	0.7613	0.9306	0.8571	0.5601	0.1197	0.0000
22	.3979	.7704	.9423	.8677	.5663	.1192	
20	.4010	.7786	.9528	.8772	.5718	.1186	
18	.4037	.7858	.9622	.8856	.5765	.1178	
16	0.4059	0.7915	0.9704	0.8930	0.5806	0.1163	
14	.4076	.7973	.9774	.8993	.5839	.1158	
12	.4088	.8017	.9832	.9044	.5866	.1147	
10	.4095	.8051	.9878	.9085	.5885	.1134	
8	0.4097	0.8075	0.9912	0.9115	0.5897	0.1120	
6	.4094	.8090	.9934	.9133	.5902	.1105	
4	.4086	.8094	.9944	.9141	.5899	.1087	
2	.4073	.8088	.9942	.9137	.5889	.1069	
0	0.4055	0.8073	0.9928	0.9122	0.5873	0.1049	
Minus 2	0.4033	0.8048	0.9901	0.9096	0.5848	0.1028	
4	.4005	.8012	.9863	.9059	.5818	.1006	
6	.3972	.7967	.9812	.9011	.5779	.0983	
8	.3934	.7913	.9750	.8952	.5734	.0958	
10	0.3892	0.7849	0.9675	0.8882	0.5682	0.0932	
12	.3845	.7775	.9589	.8801	.5623	.0905	
14	.3793	.7692	.9491	.8710	.5557	.0877	
16	.3737	.7599	.9382	.8608	.5484	.0848	
18	0.3676	0.7497	0.9261	0.8495	0.5405	0.0817	
20	.3611	.7386	.9129	.8372	.5319	.0786	
22	.3541	.7266	.8986	.8239	.5226	.0754	
24	.3467	.7137	.8832	.8096	.5127	.0721	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 80 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4068	0.7625	0.9146	0.8227	0.5111	0.0636	0.0000
22	.4125	.7736	.9280	.8347	.5185	.0642	
20	.4196	.7837	.9403	.8457	.5252	.0647	
18	.4225	.7928	.9513	.8557	.5312	.0652	
16	0.4268	0.8004	0.9613	0.8645	0.5367	0.0649	
14	.4305	.8082	.9701	.8724	.5415	.0658	
12	.4337	.8145	.9776	.8791	.5455	.0661	
10	.4364	.8198	.9840	.8849	.5490	.0663	
8	0.4385	0.8241	0.9892	0.8895	0.5517	0.0665	
6	.4401	.8274	.9931	.8930	.5538	.0665	
4	.4412	.8296	.9959	.8955	.5553	.0664	
2	.4417	.8309	.9975	.8968	.5560	.0663	
0	0.4417	0.8311	0.9978	0.8971	0.5561	0.0660	
Minus 2	0.4412	0.8303	0.9969	0.8963	0.5554	0.0657	
4	.4401	.8285	.9948	.8944	.5542	.0653	
6	.4385	.8257	.9915	.8914	.5522	.0648	
8	.4363	.8220	.9870	.8873	.5495	.0643	
10	0.4336	0.8171	0.9813	0.8821	0.5462	0.0636	
12	.4304	.8113	.9743	.8759	.5423	.0629	
14	.4267	.8045	.9662	.8686	.5376	.0621	
16	.4224	.7967	.9570	.8602	.5323	.0613	
18	0.4177	0.7880	0.9465	0.8508	0.5264	0.0603	
20	.4124	.7783	.9349	.8403	.5198	.0593	
22	.4066	.7676	.9222	.8288	.5126	.0583	
24	.4003	.7560	.9083	.8163	.5048	.0571	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 90 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4167	0.7609	0.8951	0.7893	0.4647	0.0124	0.0000
22	.4243	.7737	.9118	.8019	.4734	.0140	
20	.4315	.7855	.9255	.8141	.4810	.0156	
18	.4381	.7964	.9381	.8254	.4883	.0172	
16	0.4442	0.8056	0.9496	0.8356	0.4949	0.0180	
14	.4498	.8152	.9599	.8449	.5009	.0202	
12	.4548	.8232	.9691	.8531	.5064	.0218	
10	.4593	.8302	.9770	.8603	.5112	.0233	
8	0.4631	0.8362	0.9838	0.8664	0.5154	0.0248	
6	.4665	.8411	.9894	.8714	.5189	.0263	
4	.4692	.8450	.9937	.8754	.5219	.0277	
2	.4714	.8479	.9969	.8784	.5241	.0291	
0	0.4730	0.8498	0.9988	0.8802	0.5258	0.0304	
Minus 2	0.4741	0.8506	0.9995	0.8810	0.5267	0.0318	
4	.4745	.8503	.9990	.8807	.5272	.0330	
6	.4744	.8491	.9973	.8794	.5269	.0343	
8	.4737	.8468	.9944	.8769	.5259	.0354	
10	0.4724	0.8435	0.9902	0.8735	0.5244	0.0366	
12	.4706	.8392	.9849	.8689	.5222	.0376	
14	.4682	.8337	.9783	.8633	.5194	.0387	
16	.4652	.8273	.9706	.8566	.5159	.0397	
18	0.4616	0.8199	0.9617	0.8489	0.5118	0.0407	
20	.4575	.8115	.9516	.8401	.5071	.0416	
22	.4528	.8021	.9403	.8304	.5017	.0425	
24	.4476	.7918	.9279	.8196	.4958	.0433	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 100 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4245	0.7573	0.8782	0.7555	0.4214		
22	.4338	.7715	.8944	.7698	.4308		
20	.4427	.7849	.9095	.7832	.4397		
18	.4510	.7973	.9235	.7956	.4479		
16	0.4587	0.8080	0.9363	0.8071	0.4557		
14	.4659	.8192	.9480	.8175	.4629		
12	.4726	.8287	.9585	.8270	.4694		
10	.4787	.8372	.9679	.8355	.4755		
8	0.4841	0.8447	0.9761	0.8429	0.4809		
6	.4889	.8512	.9831	.8493	.4858		
4	.4932	.8565	.9889	.8547	.4901		
2	.4969	.8609	.9935	.8591	.4938		
0	0.5000	0.8642	0.9969	0.8624	0.4968	0.0000	
Minus 2	0.5025	0.8665	0.9990	0.8646	0.4993	0.0009	
4	.5043	.8677	1.0000	.8658	.5012	.0037	
6	.5056	.8678	.9997	.8690	.5024	.0065	
8	.5062	.8669	.9982	.8650	.5031	.0092	
10	0.5062	0.8649	0.9955	0.8631	0.5031	0.0120	
12	.5054	.8618	.9916	.8601	.5025	.0147	
14	.5044	.8578	.9865	.8560	.5013	.0174	
16	.5025	.8526	.9801	.8509	.4995	.0201	
18	0.5001	0.8465	0.9726	0.8447	0.4971	0.0228	
20	.4970	.8393	.9639	.8375	.4941	.0255	
22	.4933	.8310	.9540	.8293	.4904	.0281	
24	.4891	.8218	.9430	.8201	.4862	.0306	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 20 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.1303	0.5631	0.8797	0.9957	0.8797	0.5631	0.1303
22	.1201	.5592	.8807	.9983	.8807	.5592	.1201
20	.1096	.5547	.8805	.9997	.8805	.5547	.1096
18	.0990	.5495	.8792	.9999	.8792	.5495	.0990
16	0.0883	0.5433	0.8769	0.9989	0.8769	0.5433	0.0883
14	.0775	.5370	.8735	.9967	.8735	.5370	.0775
12	.0666	.5299	.8691	.9932	.8691	.5299	.0666
10	.0557	.5221	.8635	.9885	.8635	.5221	.0557
8	0.0446	0.5136	0.8570	0.9826	0.8570	0.5136	0.0446
6	.0335	.5045	.8494	.9756	.8494	.5045	.0335
4	.0223	.4948	.8407	.9673	.8407	.4948	.0223
2	.0112	.4845	.8310	.9579	.8310	.4845	.0112
0	0.0000	0.4736	0.8204	0.9473	0.8204	0.4736	0.0000
Minus 2		0.4622	0.8087	0.9355	0.8087	0.4622	
4		.4501	.7960	.9226	.7960	.4501	
6		.4375	.7824	.9086	.7824	.4375	
8		.4244	.7678	.8935	.7678	.4244	
10		0.4108	0.7523	0.8772	0.7523	0.4108	
12		.3967	.7358	.8599	.7358	.3967	
14		.3820	.7185	.8416	.7185	.3820	
16		.3670	.7003	.8223	.7003	.3670	
18		0.3514	0.6796	0.8019	0.6796	0.3514	
20		.3355	.6613	.7805	.6613	.3355	
22		.3191	.6406	.7582	.6406	.3191	
24		.3024	.6191	.7350	.6191	.3024	

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 10 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.1673	0.5837	0.8884	1.0000	0.8884	0.5837	0.1673
22	.1541	.5767	.8860	.9992	.8860	.5767	.1541
20	.1407	.5689	.8825	.9972	.8825	.5689	.1407
18	.1271	.5605	.8779	.9940	.8779	.5605	.1271
16	0.1134	0.5513	0.8722	0.9896	0.8722	0.5513	0.1134
14	.0995	.5417	.8654	.9839	.8654	.5417	.0995
12	.0855	.5313	.8577	.9771	.8577	.5313	.0855
10	.0714	.5202	.8488	.9691	.8488	.5202	.0714
8	0.0572	0.5086	0.8389	0.9599	0.8389	0.5086	0.0572
6	.0430	.4962	.8280	.9495	.8280	.4962	.0430
4	.0287	.4833	.8161	.9379	.8161	.4833	.0287
2	.0143	.4698	.8033	.9253	.8033	.4698	.0143
0	0.0000	0.4557	0.7894	0.9115	0.7894	0.4557	0.0000
Minus 2		0.4411	0.7745	0.8966	0.7745	0.4411	
4		.4259	.7587	.8806	.7587	.4259	
6		.4102	.7420	.8635	.7420	.4102	
8		.3941	.7244	.8454	.7244	.3941	
10		0.3774	0.7059	0.8262	0.7059	0.3774	
12		.3603	.6866	.8060	.6866	.3603	
14		.3427	.6664	.7849	.6664	.3427	
16		.3247	.6454	.7678	.6454	.3247	
18		0.3063	0.6236	0.7397	0.6236	0.3063	
20		.2876	.6011	.7158	.6011	.2876	
22		.2685	.5778	.6910	.5778	.2685	
24		.2490	.5538	.6654	.5538	.2490	

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 30 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.0936	0.5381	0.8634	0.9826	0.8634	0.5381	0.0936
22	.0862	.5374	.8676	.9885	.8676	.5374	.0862
20	.0787	.5359	.8706	.9932	.8706	.5359	.0787
18	.0711	.5339	.8726	.9966	.8726	.5339	.0711
16	0.0634	0.5307	0.8736	0.9989	0.8736	0.5307	0.0634
14	.0557	.5277	.8734	.9999	.8734	.5277	.0557
12	.0479	.5237	.8722	.9997	.8722	.5237	.0479
10	.0400	.5191	.8699	.9983	.8699	.5191	.0400
8	0.0320	0.5139	0.8666	0.9957	0.8666	0.5139	0.0320
6	.0241	.5080	.8622	.9919	.8622	.5080	.0241
4	.0160	.5014	.8568	.9869	.8568	.5014	.0160
2	.0080	.4943	.8503	.9806	.8503	.4943	.0080
0	0.0000	0.4866	0.8428	0.9732	0.8428	0.4866	0.0000
Minus 2		0.4783	0.8343	0.9646	0.8343	0.4783	
4		.4694	.8247	.9548	.8247	.4694	
6		.4599	.8141	.9438	.8141	.4599	
8		.4498	.8026	.9317	.8026	.4498	
10		0.4392	0.7901	0.9185	0.7901	0.4392	
12		.4326	.7765	.9041	.7765	.4326	
14		.4165	.7621	.8886	.7621	.4165	
16		.4043	.7467	.8721	.7467	.4043	
18		0.3917	0.7305	0.8545	0.7305	0.3917	
20		.3786	.7133	.8358	.7133	.3786	
22		.3650	.6952	.8161	.6952	.3650	
24		.3509	.6764	.7955	.6764	.3509	

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 40 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.0580	0.5102	0.8410	0.9622	0.8410	0.5102	0.0580
22	.0534	.5123	.8481	.9711	.8481	.5123	.0534
20	.0487	.5138	.8542	.9789	.8542	.5138	.0487
18	.0441	.5147	.8593	.9854	.8593	.5147	.0441
16	0.0393	0.5149	0.8633	0.9907	0.8633	0.5149	0.0393
14	.0345	.5146	.8662	.9949	.8662	.5146	.0345
12	.0297	.5136	.8681	.9978	.8681	.5136	.0297
10	.0248	.5121	.8689	.9995	.8689	.5121	.0248
8	0.0198	0.5099	0.8687	1.0000	0.8687	0.5099	0.0198
6	.0149	.5071	.8674	.9993	.8674	.5071	.0149
4	.0099	.5036	.8651	.9973	.8651	.5036	.0099
2	.0049	.4996	.8616	.9942	.8616	.4996	.0049
0	0.0000	0.4949	0.8572	0.9898	0.8572	0.4949	0.0000
Minus 2		0.4896	0.8517	0.9842	0.8517	0.4896	
4		.4837	.8451	.9774	.8451	.4837	
6		.4773	.8376	.9695	.8376	.4773	
8		.4702	.8290	.9603	.8290	.4702	
10		0.4626	0.8194	0.9500	0.8194	0.4626	
12		.4544	.8088	.9385	.8088	.4544	
14		.4457	.7972	.9259	.7972	.4457	
16		.4364	.7847	.9121	.7847	.4364	
18		0.4266	0.7712	0.8973	0.7712	0.4266	
20		.4163	.7567	.8813	.7567	.4163	
22		.4054	.7413	.8643	.7413	.4054	
24		.3941	.7251	.8462	.7251	.3941	

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 50 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.0244	0.4804	0.8140	0.9363	0.8140	0.4804	0.0244
22	.0225	.4852	.8239	.9480	.8239	.4852	.0225
20	.0205	.4895	.8328	.9585	.8328	.4895	.0205
18	.0185	.4931	.8406	.9679	.8406	.4931	.0185
16	0.0165	0.4956	0.8475	0.9761	0.8475	0.4956	0.0165
14	.0145	.4987	.8533	.9831	.8533	.4987	.0145
12	.0125	.5005	.8580	.9889	.8580	.5005	.0125
10	.0104	.5019	.8617	.9935	.8617	.5019	.0104
8	0.0083	0.5026	0.8644	0.9968	0.8644	0.5026	0.0083
6	.0063	.5026	.8660	.9990	.8660	.5026	.0063
4	.0042	.5021	.8665	.9999	.8665	.5021	.0042
2	.0021	.5009	.8660	.9997	.8660	.5009	.0021
0	0.0000	0.4991	0.8645	0.9982	0.8645	0.4991	0.0000
Minus 2		0.4967	0.8619	0.9955	0.8619	0.4967	
4		.4937	.8582	.9916	.8582	.4937	
6		.4901	.8535	.9865	.8535	.4901	
8		.4859	.8477	.9801	.8477	.4859	
10		0.4811	0.8409	0.9726	0.8409	0.4811	
12		.4757	.8331	.9639	.8331	.4757	
14		.4698	.8243	.9541	.8243	.4698	
16		.4633	.8145	.9430	.8145	.4633	
18		0.4561	0.8037	0.9308	0.8037	0.4561	
20		.4485	.7919	.9175	.7919	.4485	
22		.4403	.7791	.9031	.7791	.4403	
24		.4316	.7654	.8875	.7654	.4316	

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 60 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24		0.4499	0.7840	0.9065	0.7840	0.4499	
22		.4573	.7965	.9207	.7965	.4573	
20		.4640	.8079	.9338	.8079	.4640	
18		.4702	.8183	.9457	.8183	.4702	
16		0.4751	0.8277	0.9565	0.8277	0.4751	
14		.4809	.8361	.9661	.8361	.4809	
12		.4854	.8435	.9745	.8435	.4854	
10		.4893	.8498	.9817	.8498	.4893	
8		0.4927	0.8551	0.9878	0.8551	0.4927	
6		.4954	.8594	.9926	.8594	.4954	
4		.4975	.8626	.9962	.8626	.4975	
2		.4990	.8648	.9987	.8648	.4990	
0	0.0000	0.4999	0.8659	0.9999	0.8659	0.4999	0.0000
Minus 2	0.0006	0.5002	0.8660	0.9998	0.8660	0.5002	0.0006
4	.0012	.4999	.8650	.9986	.8650	.4999	.0012
6	.0018	.4989	.8629	.9961	.8629	.4989	.0018
8	.0024	.4974	.8598	.9925	.8598	.4974	.0024
10	0.0029	0.4952	0.8557	0.9876	0.8557	0.4952	0.0029
12	.0035	.4925	.8505	.9815	.8505	.4925	.0035
14	.0041	.4891	.8443	.9742	.8443	.4891	.0041
16	.0046	.4852	.8370	.9657	.8370	.4852	.0046
18	0.0052	0.4806	0.8287	0.9561	0.8287	0.4806	0.0052
20	.0057	.4755	.8194	.9453	.8194	.4755	.0057
22	.0063	.4698	.8091	.9333	.8091	.4698	.0063
24	.0068	.4635	.7979	.9203	.7979	.4635	.0068

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 70 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24		0.4197	0.7526	0.8747	0.7526	0.4197	
22		.4293	.7672	.8911	.7672	.4293	
20		.4383	.7809	.9064	.7809	.4383	
18		.4468	.7936	.9205	.7936	.4468	
16		0.4539	0.8053	0.9336	0.8053	0.4539	
14		.4621	.8160	.9456	.8160	.4621	
12		.4690	.8258	.9563	.8258	.4690	
10		.4753	.8345	.9660	.8345	.4753	
8		0.4811	0.8392	0.9744	0.8392	0.4811	
6		.4863	.8489	.9817	.8489	.4863	
4		.4908	.8546	.9877	.8546	.4908	
2		.4947	.8592	.9926	.8592	.4947	
0	0.0000	0.4981	0.8627	0.9962	0.8627	0.4981	0.0000
Minus 2	0.0031	0.5008	0.8653	0.9986	0.8653	0.5008	0.0031
4	.0061	.5029	.8667	.9999	.8667	.5029	.0061
6	.0091	.5045	.8671	.9998	.8671	.5045	.0091
8	.0121	.5053	.8665	.9986	.8665	.5053	.0121
10	0.0151	0.5056	0.8647	0.9962	0.8647	0.5056	0.0151
12	.0181	.5053	.8620	.9925	.8620	.5053	.0181
14	.0211	.5043	.8582	.9877	.8582	.5043	.0211
16	.0240	.5028	.8533	.9816	.8533	.5028	.0240
18	0.0269	0.5006	0.8474	0.9743	0.8474	0.5006	0.0269
20	.0298	.4978	.8405	.9659	.8405	.4978	.0298
22	.0326	.4944	.8325	.9563	.8325	.4944	.0326
24	.0354	.4904	.8235	.9455	.8235	.4904	.0354

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 80 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24		0.3904	0.7207	0.8419	0.7207	0.3904	
22		.4020	.7373	.8602	.7373	.4020	
20		.4130	.7530	.8775	.7530	.4130	
18		.4235	.7677	.8937	.7677	.4235	
16		0.4327	0.7815	0.9088	0.7815	0.4327	
14		.4430	.7943	.9228	.7943	.4430	
12		.4520	.8061	.9357	.8061	.4520	
10		.4605	.8170	.9474	.8170	.4605	
8		0.4685	0.8268	0.9580	0.8268	0.4685	
6		.4758	.8357	.9674	.8357	.4758	
4		.4826	.8436	.9757	.8436	.4826	
2		.4887	.8504	.9877	.8504	.4887	
0	0.0000	0.4943	0.8561	0.9886	0.8561	0.4943	0.0000
Minus 2	0.0053	0.4993	0.8609	0.9933	0.8609	0.4993	0.0053
4	.0105	.5036	.8646	.9967	.8646	.5036	.0105
6	.0157	.5073	.8672	.9989	.8672	.5073	.0157
8	.0210	.5104	.8688	.9999	.8688	.5104	.0210
10	0.0261	0.5129	0.8693	0.9997	0.8693	0.5129	0.0261
12	.0313	.5148	.8687	.9983	.8687	.5148	.0313
14	.0364	.5160	.8671	.9957	.8671	.5160	.0364
16	.0415	.5167	.8645	.9918	.8645	.5167	.0415
18	0.0465	0.5166	0.8608	0.9867	0.8608	0.5166	0.0465
20	.0515	.5160	.8560	.9805	.8560	.5160	.0515
22	.0564	.5147	.8502	.9730	.8502	.5147	.0564
24	.0612	.5128	.8434	.9644	.8434	.5128	.0612

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 90 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24		0.3624	0.6892	0.8098	0.6892	0.3624	
22		.3757	.7075	.8291	.7075	.3757	
20		.3886	.7249	.8481	.7249	.3886	
18		.4009	.7414	.8661	.7414	.4009	
16		0.4118	0.7571	0.8830	0.7571	0.4118	
14		.4241	.7717	.8989	.7717	.4241	
12		.4351	.7854	.9136	.7854	.4351	
10		.4455	.7982	.9273	.7982	.4455	
8		0.4554	0.8100	0.9398	0.8100	0.4554	
6		.4647	.8208	.9511	.8208	.4647	
4		.4734	.8306	.9613	.8306	.4734	
2		.4815	.8394	.9703	.8394	.4815	
0	0.0000	0.4891	0.8471	0.9782	0.8471	0.4891	0.0000
Minus 2	0.0073	0.4961	0.8539	0.9849	0.8539	0.4961	0.0073
4	.0145	.5024	.8596	.9903	.8596	.5024	.0145
6	.0217	.5081	.8642	.9945	.8642	.5081	.0217
8	.0289	.5132	.8678	.9976	.8678	.5132	.0289
10	0.0360	0.5177	0.8703	0.9994	0.8703	0.5177	0.0360
12	.0432	.5216	.8718	1.0000	.8718	.5216	.0432
14	.0503	.5248	.8722	.9994	.8722	.5248	.0503
16	.0573	.5274	.8716	.9975	.8716	.5274	.0573
18	0.0642	0.5293	0.8699	0.9945	0.8699	0.5293	0.0642
20	.0710	.5306	.8671	.9902	.8671	.5306	.0710
22	.0778	.5313	.8633	.9848	.8633	.5313	.0778
24	.0845	.5313	.8584	.9781	.8584	.5313	.0845

Table 4.--Sin θ, latitude 30°--continued

Latitude: 30°
Slope: 100 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24		0.3360	0.6587	0.7771	0.6587	0.3360	
22		.3509	.6785	.7986	.6785	.3509	
20		.3653	.6975	.8191	.6975	.3653	
18		.3793	.7155	.8387	.7155	.3793	
16		0.3918	0.7327	0.8572	0.7327	0.3918	
14		.4058	.7490	.8746	.7490	.4058	
12		.4184	.7644	.8910	.7644	.4184	
10		.4306	.7788	.9063	.7788	.4306	
8		0.4422	0.7923	0.9205	0.7923	0.4422	
6		.4533	.8049	.9336	.8049	.4533	
4		.4637	.8164	.9455	.8164	.4637	
2		.4736	.8270	.9563	.8270	.4736	
0	0.0000	0.4829	0.8365	0.9659	0.8365	0.4829	0.0000
Minus 2	0.0091	0.4917	0.8450	0.9744	0.8450	0.4917	0.0091
4	.0181	.4998	.8525	.9816	.8525	.4998	.0181
6	.0271	.5074	.8590	.9877	.8590	.5074	.0271
8	.0360	.5143	.8644	.9925	.8644	.5143	.0360
10	0.0449	0.5206	0.8688	0.9962	0.8688	0.5206	0.0449
12	.0538	.5262	.8721	.9986	.8721	.5262	.0538
14	.0626	.5312	.8743	.9999	.8743	.5312	.0626
16	.0713	.5356	.8755	.9999	.8755	.5356	.0713
18	0.0800	0.5393	0.8756	0.9986	0.8756	0.5393	0.0800
20	.0885	.5424	.8746	.9962	.8746	.5424	.0885
22	.0969	.5447	.8726	.9925	.8726	.5447	.0969
24	.1053	.5465	.8695	.9877	.8695	.5465	.1053

Table 5.--Values of Sin θ[1/] for latitude 34°

Latitude 34°
Slope: 0 percent

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2274	0.6061	0.8833	0.9848	0.8833	0.6061	0.2274
	22	.2095	.5938	.8752	.9781	.8752	.5938	.2095
	20	.1913	.5808	.8659	.9703	.8659	.5808	.1913
	18	.1728	.5670	.8556	.9613	.8556	.5670	.1728
	16	0.1541	0.5526	0.8443	0.9511	0.8443	0.5526	0.1541
	14	.1353	.5375	.8319	.9397	.8319	.5375	.1353
	12	.1163	.5217	.8185	.9272	.8185	.5217	.1163
	10	.0971	.5053	.8042	.9135	.8042	.5053	.0971
	8	0.0778	0.4883	0.7888	0.8988	0.7888	0.4883	0.0778
	6	.0585	.4707	.7725	.8829	.7725	.4707	.0585
	4	.0390	.4525	.7552	.8660	.7552	.4525	.0390
	2	.0195	.4338	.7371	.8481	.7371	.4338	.0195
	0	0.0000	0.4145	0.7180	0.8290	0.7180	0.4145	0.0000
Minus	2		0.3947	0.6980	0.8090	0.6980	0.3947	
	4		.3745	.6772	.7880	.6772	.3745	
	6		.3538	.6556	.7660	.6556	.3538	
	8		.3327	.6332	.7431	.6332	.3327	
	10		0.3111	0.6100	0.7193	0.6100	0.3111	
	12		.2892	.5860	.6947	.5860	.2892	
	14		.2669	.5614	.6691	.5614	.2669	
	16		.2443	.5360	.6428	.5360	.2443	
	18		0.2214	0.5100	0.6157	0.5100	0.2214	
	20		.1983	.4834	.5878	.4834	.1983	
	22		.1749	.4562	.5592	.4562	.1749	
	24		.1513	.4285	.5299	.4285	.1513	

1/ For zero slope Sin θ = Sin A.

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 10 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.2599	0.6113	0.8685	0.9627	0.8685	0.6113	0.2599
22	.2393	.5960	.8571	.9526	.8571	.5960	.2393
20	.2185	.5800	.8446	.9414	.8446	.5800	.2185
18	.1974	.5633	.8311	.9291	.8311	.5633	.1974
16	0.1761	0.5459	0.8165	0.9156	0.8165	0.5459	0.1761
14	.1546	.5278	.8010	.9010	.8010	.5278	.1546
12	.1328	.5091	.7845	.8853	.7845	.5091	.1328
10	.1109	.4898	.7671	.8685	.7671	.4898	.1109
8	0.0889	0.4698	0.7487	0.8507	0.7487	0.4698	0.0889
6	.0668	.4493	.7294	.8319	.7294	.4493	.0668
4	.0446	.4283	.7092	.8120	.7092	.4283	.0446
2	.0223	.4067	.6881	.7911	.6881	.4067	.0223
0	0.0000	0.3846	0.6662	0.7693	0.6662	0.3846	0.0000
Minus 2		0.3621	0.6435	0.7465	0.6435	0.3621	
4		.3391	.6200	.7228	.6200	.3391	
6		.3158	.5958	.6983	.5958	.3158	
8		.2920	.5708	.6729	.5708	.2920	
10		0.2679	0.5452	0.6467	0.5452	0.2679	
12		.2434	.5188	.6196	.5188	.2434	
14		.2187	.4919	.5919	.4919	.2187	
16		.1936	.4643	.5634	.4643	.1936	
18		0.1684	0.4362	0.5342	0.4362	0.1684	
20		.1429	.4075	.5044	.4075	.1429	
22		.1173	.3784	.4739	.3784	.1173	
24		.0915	.3488	.4429	.3488	.0915	

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 20 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.2892	0.6104	0.8456	0.9316	0.8456	0.6104	0.2892
22	.2663	.5923	.8310	.9184	.8310	.5923	.2663
20	.2431	.5736	.8155	.9040	.8155	.5736	.2431
18	.2197	.5541	.7989	.8885	.7989	.5541	.2197
16	0.1960	0.5340	0.7814	0.8720	0.7814	0.5340	0.1960
14	.1720	.5132	.7630	.8544	.7630	.5132	.1720
12	.1478	.4918	.7436	.8357	.7436	.4918	.1478
10	.1234	.4697	.7233	.8160	.7233	.4697	.1234
8	0.0989	0.4472	0.7021	0.7954	0.7021	0.4472	0.0989
6	.0743	.4240	.6800	.7737	.6800	.4240	.0743
4	.0496	.4004	.6572	.7511	.6572	.4004	.0496
2	.0248	.3763	.6335	.7277	.6335	.3763	.0248
0	0.0000	0.3516	0.6091	0.7033	0.6091	0.3516	0.0000
Minus 2		0.3266	0.5839	0.6780	0.5839	0.3266	
4		.3012	.5580	.6520	.5580	.3012	
6		.2754	.5314	.6251	.5314	.2754	
8		.2493	.5042	.5975	.5042	.2493	
10		0.2229	0.4764	0.5691	0.4764	0.2229	
12		.1961	.4480	.5401	.4480	.1961	
14		.1692	.4190	.5104	.4190	.1692	
16		.1421	.3895	.4801	.3895	.1421	
18		0.1147	0.3596	0.4492	0.3596	0.1147	
20		.0873	.3292	.4177	.3292	.0873	
22		.0597	.2984	.3857	.2984	.0597	
24		.0321	.2672	.3533	.2672	.0321	

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 30 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3148	0.6040	0.8159	0.8934	0.8159	0.6040	0.3148
22	.2899	.5834	.7985	.8771	.7985	.5835	.2899
20	.2647	.5623	.7801	.8599	.7801	.5623	.2647
18	.2391	.5405	.7608	.8415	.7608	.5405	.2391
16	0.2133	0.5178	0.7406	0.8221	0.7406	0.5178	0.2133
14	.1872	.4945	.7195	.8018	.7195	.4945	.1872
12	.1609	.4707	.6975	.7804	.6975	.4707	.1609
10	.1343	.4463	.6746	.7581	.6746	.4463	.1343
8	0.1077	0.4213	0.6509	0.7349	0.6509	0.4213	0.1077
6	.0809	.3959	.6264	.7108	.6264	.3959	.0809
4	.0540	.3699	.6012	.6858	.6012	.3699	.0540
2	.0271	.3435	.5752	.6600	.5752	.3435	.0271
0	0.0000	0.3167	0.5485	0.6334	0.5485	0.3167	0.0000
Minus 2		0.2895	0.5212	0.6060	0.5212	0.2895	
4		.2619	.4932	.5779	.4932	.2619	
6		.2341	.4647	.5490	.4647	.2341	
8		.2059	.4355	.5195	.4355	.2059	
10		0.1775	0.4058	0.4894	0.4058	0.1775	
12		.1489	.3757	.4587	.3757	.1489	
14		.1201	.3450	.4274	.3450	.1201	
16		.0911	.3140	.3956	.3140	.0911	
18		0.0621	0.2826	0.3633	0.2826	0.0621	
20		.0329	.2508	.3305	.2508	.0329	
22		.0037	.2187	.2974	.2187	.0037	
24		.0000	.1864	.2639	.1864	.0000	

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 40 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3364	0.5931	0.7811	0.8499	0.7811	0.5931	0.3364
22	.3098	.5704	.7612	.8310	.7612	.5704	.3098
20	.2829	.5470	.7403	.8111	.7403	.5470	.2829
18	.2556	.5231	.7185	.7901	.7185	.5231	.2556
16	0.2280	0.4982	0.6959	0.7683	0.6959	0.4982	0.2280
14	.2001	.4728	.6724	.7455	.6724	.4728	.2001
12	.1720	.4469	.6481	.7217	.6481	.4469	.1720
10	.1436	.4205	.6230	.6971	.6230	.4205	.1436
8	0.1151	0.3934	0.5971	0.6717	0.5971	0.3934	0.1151
6	.0865	.3660	.5706	.6454	.5706	.3660	.0865
4	.0577	.3381	.5433	.6184	.5433	.3381	.0577
2	.0289	.3097	.5153	.5906	.5153	.3097	.0289
0	0.0000	0.2810	0.4866	0.5621	0.4866	0.2810	0.0000
Minus 2	.....	0.2520	0.4576	0.5329	0.4576	0.2520	.....
4		.2227	.4279	.5030	.4279	.2227	
6		.1931	.3977	.4725	.3977	.1931	
8		.1632	.3669	.4415	.3669	.1632	
10		0.1332	0.3358	0.4099	0.3358	0.1332	
12		.1029	.3042	.3778	.3042	.1029	
14		.0727	.2722	.3453	.2722	.0727	
16		.0422	.2399	.3123	.2399	.0422	
18		0.0117	0.2074	0.2790	0.2074	0.0117	
20		.0000	.1745	.2453	.1745	.0000	
22			.1415	.2113	.1415		
24			.1083	.1771	.1083		

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 50 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3543	0.5787	0.7430	0.8032	0.7430	0.5787	0.3543
	22	.3263	.5541	.7209	.7819	.7209	.5541	.3263
	20	.2979	.5288	.6978	.7597	.6978	.5288	.2979
	18	.2691	.5031	.6739	.7365	.6739	.5031	.2691
	16	0.2401	0.4764	0.6492	0.7125	0.6492	0.4764	0.2401
	14	.2107	.4492	.6237	.6875	.6237	.4492	.2107
	12	.1811	.4215	.5974	.6618	.5974	.4215	.1811
	10	.1512	.3933	.5704	.6352	.5704	.3933	.1512
	8	0.1212	0.3645	0.5427	0.6079	0.5427	0.3645	0.1212
	6	.0911	.3354	.5143	.5798	.5143	.3354	.0911
	4	.0608	.3059	.4853	.5510	.4853	.3059	.0608
	2	.0305	.2760	.4557	.5215	.4557	.2760	.0305
	0	0.0000	0.2457	0.4256	0.4914	0.4256	0.2457	0.0000
Minus	2		0.2152	0.3949	0.4607	0.3949	0.2152	
	4		.1844	.3638	.4295	.3638	.1844	
	6		.1533	.3322	.3977	.3322	.1533	
	8		.1221	.3003	.3655	.3003	.1221	
	10		0.0908	0.2679	0.3327	0.2679	0.0908	
	12		.0593	.2353	.2996	.2353	.0593	
	14		.0277	.2023	.2661	.2023	.0277	
	16		.0000	.1691	.2323	.1691	.0000	
	18			0.1357	0.1983	0.1357		
	20			.1021	.1639	.1021		
	22			.0684	.1294	.0684		
	24			.0346	.0947	.0346		

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 60 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3685	0.5618	0.7033	0.7551	0.7033	0.5618	0.3685
22	.3394	.5356	.6792	.7318	.6792	.5356	.3394
20	.3099	.5087	.6543	.7075	.6543	.5087	.3099
18	.2800	.4815	.6286	.6825	.6286	.4815	.2800
16	0.2497	0.4533	0.6021	0.6565	0.6021	0.4533	0.2497
14	.2192	.4246	.5748	.6298	.5748	.4246	.2192
12	.1884	.3954	.5469	.6023	.5469	.3954	.1884
10	.1573	.3658	.5183	.5741	.5183	.3658	.1573
8	0.1261	0.3356	0.4890	0.5452	0.4890	0.3356	0.1261
6	.0947	.3052	.4592	.5156	.4592	.3052	.0947
4	.0633	.2743	.4288	.4854	.4288	.2743	.0633
2	.0317	.2431	.3979	.4545	.3979	.2431	.0317
0	0.0000	0.2116	0.3665	0.4232	0.3665	0.2116	0.0000
Minus 2		0.1798	0.3346	0.3913	0.3346	0.1798	
4		.1479	.3024	.3589	.3024	.1479	
6		.1157	.2698	.3261	.2698	.1157	
8		.0835	.2368	.2930	.2368	.0835	
10		0.0511	0.2036	0.2594	0.2036	0.0511	
12		.0186	.1701	.2256	.1701	.0186	
14		.0000	.1364	.1914	.1364	.0000	
16			.1025	.1571	.1025		
18			0.0686	0.1225	0.0686		
20			.0345	.0878	.0345		
22			.0004	.0530	.0004		
24			.0000	.0181	.0000		

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 70 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3797	0.5434	0.6633	0.7072	0.6633	0.5434	0.3797
22	.3497	.5159	.6376	.6821	.6376	.5159	.3497
20	.3193	.4877	.6110	.6562	.6110	.4877	.3193
18	.2885	.4593	.5838	.6294	.5838	.4593	.2885
16	0.2573	0.4298	0.5558	0.6019	0.5558	0.4298	0.2573
14	.2258	.3999	.5271	.5737	.5271	.3999	.2258
12	.1941	.3695	.4978	.5447	.4978	.3695	.1941
10	.1621	.3387	.4679	.5152	.4679	.3387	.1621
8	0.1299	0.3074	0.4374	0.4849	0.4374	0.3074	0.1299
6	.0976	.2759	.4064	.4541	.4064	.2759	.0976
4	.0652	.2440	.3748	.4227	.3748	.2440	.0652
2	.0327	.2117	.3429	.3909	.3429	.2117	.0327
0	0.0000	0.1793	0.3105	0.3585	0.3105	0.1793	0.0000
Minus 2		0.1466	0.2777	0.3257	0.2777	0.1466	
4		.1137	.2446	.2925	.2446	.1137	
6		.0807	.2112	.2589	.2112	.0807	
8		.0476	.1775	.2251	.1775	.0476	
10		0.0145	0.1437	0.1909	0.1437	0.0145	
12		.0000	.1096	.1566	.1096	.0000	
14			.0754	.1220	.0754		
16			.0411	.0873	.0411		
18			0.0068	0.0525	0.0068		
20			.0000	.0176	.0000		
22				.0000			
24							

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 80 percent

Exp. North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3883	0.5243	0.6240	0.6605	0.6240	0.5243	0.3883
22	.3576	.4958	.5969	.6339	.5969	.4958	.3576
20	.3265	.4665	.5690	.6065	.5690	.4665	.3265
18	.2950	.4371	.5405	.5784	.5405	.4371	.2950
16	0.2631	0.4065	0.5113	0.5496	0.5113	0.4065	0.2631
14	.2309	.3756	.4814	.5201	.4814	.3756	.2309
12	.1985	.3443	.4510	.4900	.4510	.3443	.1985
10	.1657	.3126	.4200	.4593	.4200	.3126	.1657
8	0.1329	0.2804	0.3885	0.4280	0.3885	0.2804	0.1329
6	.0998	.2480	.3565	.3962	.3565	.2480	.0998
4	.0667	.2153	.3241	.3639	.3241	.2153	.0667
2	.0334	.1823	.2913	.3312	.2913	.1823	.0334
0	0.0000	0.1491	0.2581	0.2980	0.2581	0.1491	0.0000
Minus 2		0.1156	0.2246	0.2646	0.2246	0.1156	
4		.0821	.1909	.2307	.1909	.0821	
6		.0484	.1569	.1966	.1569	.0484	
8		.0147	.1228	.1623	.1228	.0147	
10		0.0000	0.0885	0.1278	0.0885	0.0000	
12			.0540	.0931	.0540		
14			.0195	.0583	.0195		
16			.0000	.0234	.0000		
18				0.0000			
20							
22							
24							

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 90 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3947	0.5052	0.5862	0.6159	0.5862	0.5052	0.3947
22	.3635	.4757	.5579	.5880	.5579	.4757	.3635
20	.3319	.4456	.5289	.5594	.5289	.4456	.3319
18	.2998	.4154	.4993	.5301	.4993	.4154	.2998
16	0.2674	0.3840	0.4691	0.5002	0.4691	0.3840	0.2674
14	.2347	.3523	.4383	.4697	.4383	.3523	.2347
12	.2017	.3203	.4069	.4386	.4069	.3203	.2017
10	.1684	.2879	.3750	.4070	.3750	.2879	.1684
8	0.1350	0.2550	0.3427	0.3749	0.3427	0.2550	0.1350
6	.1015	.2219	.3100	.3423	.3100	.2219	.1015
4	.0678	.1885	.2769	.3093	.2769	.1885	.0678
2	.0340	.1549	.2435	.2759	.2435	.1549	.0340
0	0.0000	0.1211	0.2098	0.2422	0.2098	0.1211	0.0000
Minus 2	.....	0.0871	0.1757	0.2082	0.1757	0.0871	.....
4		.0531	.1415	.1739	.1415	.0531	
6		.0190	.1072	.1394	.1072	.0190	
8		.0000	.0727	.1048	.0727	.0000	
10			0.0381	0.0700	0.0381		
12			.0034	.0351	.0034		
14			.0000	.0003	.0000		
16				.0000			
18							
20							
22							
24							

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 100 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3993	0.4863	0.5502	0.5736	0.5502	0.4863	0.3993
22	.3677	.4562	.5210	.5446	.5210	.4562	.3677
20	.3357	.4254	.4910	.5151	.4910	.4254	.3357
18	.3033	.3945	.4605	.4848	.4605	.3945	.3033
16	0.2706	0.3625	0.4295	0.4540	0.4295	0.3625	0.2706
14	.2375	.3302	.3979	.4226	.3979	.3302	.2375
12	.2041	.2975	.3658	.3907	.3658	.2975	.2041
10	.1704	.2645	.3332	.3584	.3332	.2645	.1704
8	0.1366	0.2311	0.3003	0.3256	0.3003	0.2311	0.1366
6	.1027	.1975	.2670	.2924	.2670	.1975	.1027
4	.0686	.1637	.2333	.2588	.2333	.1637	.0686
2	.0344	.1296	.1994	.2249	.1994	.1296	.0344
0	0.0000	0.0954	0.1653	0.1908	0.1653	0.0954	0.0000
Minus 2		0.0611	0.1309	0.1564	0.1309	0.0611	
4		.0267	.0964	.1219	.0964	.0267	
6		.0000	.0617	.0871	.0617	.0000	
8			.0270	.0523	.0270		
10			0.0000	0.0175	0.0000		
12				.0000			
14							
16							
18							
20							
22							
24							

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 10 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3143	0.6645	0.9037	0.9677	0.8394	0.5532	0.1858
22	.2955	.6510	.8937	.9587	.8285	.5380	.1651
20	.2764	.6366	.8826	.9485	.8165	.5221	.1441
18	.2569	.6215	.8705	.9371	.8036	.5056	.1231
16	0.2371	0.6056	0.8573	0.9246	0.7896	0.4885	0.1018
14	.2170	.5890	.8430	.9110	.7747	.4707	.0805
12	.1966	.5716	.8277	.8962	.7589	.4524	.0590
10	.1760	.5536	.8114	.8804	.7421	.4336	.0375
8	0.1552	0.5349	0.7941	0.8635	0.7244	0.4142	0.0159
6	.1342	.5155	.7759	.8455	.7059	.3943	.0000
4	.1131	.4955	.7567	.8265	.6865	.3739	
2	.0918	.4749	.7365	.8065	.6662	.3531	
0	0.0704	0.4537	0.7155	0.7856	0.6452	0.3319	
Minus 2	0.0489	0.4320	0.6936	0.7637	0.6233	0.3102	
4	.0273	.4097	.6709	.7408	.6007	.2882	
6	.0057	.3870	.6473	.7170	.5774	.2658	
8	.0000	.3638	.6230	.6924	.5533	.2431	
10		0.3401	0.5979	0.6669	0.5286	0.2201	
12		.3160	.5721	.6406	.5033	.1968	
14		.2915	.5455	.6135	.4773	.1733	
16		.2667	.5183	.5857	.4507	.1496	
18		0.2415	0.4905	0.5572	0.4236	0.1257	
20		.2161	.4621	.5279	.3960	.1016	
22		.1904	.4331	.4981	.3679	.0774	
24		.1645	.4036	.4676	.3393	.0531	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 20 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3965	0.7154	0.9149	0.9416	0.7883	0.4960	0.1431
22	.3771	.7007	.9033	.9303	.7747	.4780	.1199
20	.3572	.6852	.8905	.9179	.7601	.4595	.0965
18	.3369	.6690	.8766	.9044	.7447	.4405	.0731
16	0.3161	0.6518	0.8617	0.8897	0.7284	0.4209	0.0495
14	.2950	.6338	.8457	.8740	.7111	.4007	.0259
12	.2735	.6151	.8287	.8572	.6930	.3801	.0023
10	.2517	.5956	.8107	.8394	.6741	.3590	.0000
8	0.2296	0.5754	0.7916	0.8205	0.6543	0.3375	
6	.2073	.5545	.7717	.8007	.6338	.3156	
4	.1846	.5329	.7508	.7799	.6124	.2933	
2	.1618	.5107	.7289	.7581	.5903	.2706	
0	0.1387	0.4878	0.7062	0.7354	0.5675	0.2476	
Minus 2	0.1154	0.4643	0.6826	0.7118	0.5440	0.2243	
4	.0921	.4403	.6582	.6873	.5199	.2007	
6	.0686	.4158	.6330	.6620	.4951	.1769	
8	.0450	.3907	.6070	.6359	.4697	.1529	
10	0.0214	0.3652	0.5803	0.6090	0.4437	0.1287	
12	.0000	.3392	.5529	.5814	.4172	.1043	
14		.3128	.5248	.5531	.3902	.0798	
16		.2861	.4960	.5241	.3627	.0552	
18		0.2589	0.4667	0.4944	0.3348	0.0305	
20		.2315	.4368	.4642	.3064	.0058	
22		.2038	.4063	.4334	.2777	.0000	
24		.1759	.3754	.4020	.2487		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 30 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4720	0.7579	0.9175	0.9080	0.7319	0.4364	0.1008
22	.4521	.7423	.9043	.8947	.7159	.4160	.0753
20	.4317	.7259	.8900	.8802	.6991	.3951	.0499
18	.4108	.7086	.8747	.8647	.6814	.3739	.0243
16	0.3894	0.6903	0.8582	0.8481	0.6629	0.3520	0.0000
14	.3675	.6712	.8407	.8306	.6435	.3297	
12	.3451	.6513	.8222	.8120	.6234	.3071	
10	.3223	.6307	.8027	.7924	.6025	.2841	
8	0.2992	0.6091	0.7821	0.7718	0.5809	0.2607	
6	.2757	.5870	.7607	.7503	.5586	.2370	
4	.2518	.5641	.7383	.7279	.5356	.2130	
2	.2277	.5405	.7150	.7046	.5120	.1887	
0	0.2032	0.5162	0.6909	0.6805	0.4877	0.1643	
Minus 2	0.1785	0.4913	0.6659	0.6555	0.4628	0.1396	
4	.1536	.4658	.6401	.6297	.4374	.1147	
6	.1285	.4398	.6135	.6031	.4114	.0898	
8	.1032	.4132	.5862	.5758	.3850	.0647	
10	0.0779	0.3861	0.5581	0.5479	0.3580	0.0395	
12	.0524	.3585	.5294	.5192	.3307	.0143	
14	.0268	.3305	.5000	.4899	.3029	.0000	
16	.0013	.3021	.4701	.4600	.2747		
18	0.0000	0.2734	0.4395	0.4296	0.2463		
20		.2443	.4084	.3986	.2175		
22		.2149	.3768	.3671	.1884		
24		.1852	.3448	.3353	.1592		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 40 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5396	0.7920	0.9125	0.8688	0.6726	0.3765	0.0598
22	.5195	.7757	.8980	.8536	.6545	.3539	.0326
20	.4988	.7584	.8823	.8374	.6356	.3310	.0053
18	.4775	.7404	.8657	.8201	.6159	.3078	.0000
16	0.4556	0.7212	0.8479	0.8019	0.5955	0.2839	
14	.4331	.7012	.8291	.7827	.5743	.2598	
12	.4101	.6804	.8093	.7625	.5525	.2354	
10	.3866	.6551	.7885	.7414	.5299	.2107	
8	0.3626	0.6362	0.7668	0.7194	0.5067	0.1858	
6	.3382	.6130	.7441	.6965	.4829	.1606	
4	.3134	.5890	.7205	.6728	.4586	.1352	
2	.2882	.5643	.6961	.6482	.4336	.1097	
0	0.2626	0.5389	0.6708	0.6229	0.4079	0.0840	
Minus 2	0.2367	0.5128	0.6446	0.5968	0.3822	0.0583	
4	.2105	.4862	.6177	.5700	.3557	.0324	
6	.1841	.4589	.5901	.5424	.3289	.0065	
8	.1575	.4311	.5617	.5143	.3061	.0000	
10	0.1307	0.4027	0.5326	0.4855	0.2740		
12	.1037	.3739	.5029	.4561	.2460		
14	.0765	.3447	.4726	.4261	.2177		
16	.0493	.3149	.4416	.3957	.1892		
18	0.0220	0.2848	0.4102	0.3647	0.1605		
20		.2543	.3783	.3333	.1315		
22		.2236	.3459	.3015	.1024		
24		.1926	.3130	.2693	.0731		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 50 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5990	0.8182	0.9013	0.8259	0.6124	0.3178	0.0212
22	.5788	.8013	.8856	.8091	.5924	.2934	.0000
20	.5579	.7834	.8688	.7914	.5717	.2687	
18	.5363	.7648	.8511	.7726	.5503	.2438	
16	0.5141	0.7449	0.8322	0.7529	0.5283	0.2184	
14	.4913	.7242	.8124	.7323	.5055	.1927	
12	.4678	.7026	.7915	.7108	.4822	.1668	
10	.4438	.6802	.7697	.6885	.4583	.1408	
8	0.4192	0.6569	0.7469	0.6653	0.4338	0.1145	
6	.3942	.6329	.7233	.6413	.4088	.0881	
4	.3687	.6080	.6987	.6165	.3833	.0617	
2	.3427	.5825	.6734	.5909	.3573	.0351	
0	0.3162	0.5562	0.6471	0.5647	0.3309	0.0085	
Minus 2	0.2894	0.5293	0.6201	0.5377	0.3041	0.0000	
4	.2622	.5017	.5924	.5101	.2769		
6	.2348	.4735	.5639	.4819	.2494		
8	.2071	.4447	.5348	.4531	.2216		
10	0.1791	0.4154	0.5050	0.4237	0.1935		
12	.1508	.3856	.4745	.3938	.1652		
14	.1224	.3553	.4435	.3635	.1367		
16	.0939	.3245	.4119	.3327	.1080		
18	0.0652	0.2934	0.3799	0.3015	0.0792		
20	.0364	.2619	.3474	.2699	.0503		
22	.0076	.2301	.3145	.2380	.0213		
24	.0000	.1981	.2811	.2058	.0000		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 60 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6501	0.8373	0.8854	0.7813	0.5530	0.2616	0.0000
22	.6299	.8200	.8688	.7631	.5314	.2357	
20	.6090	.8017	.8511	.7440	.5092	.2095	
18	.5874	.7826	.8324	.7240	.4864	.1833	
16	0.5650	0.7622	0.8126	0.7031	0.4629	0.1564	
14	.5420	.7409	.7919	.6813	.4389	.1295	
12	.5183	.7188	.7702	.6588	.4144	.1024	
10	.4939	.6959	.7476	.6354	.3893	.0753	
8	0.4690	0.6720	0.7240	0.6112	0.3638	0.0480	
6	.4435	.6473	.6996	.5863	.3378	.0207	
4	.4175	.6219	.6743	.5607	.3114	.0000	
2	.3909	.5957	.6483	.5344	.2847		
0	0.3638	0.5688	0.6214	0.5075	0.2576		
Minus 2	0.3363	0.5412	0.5937	0.4799	0.2301		
4	.3084	.5129	.5654	.4517	.2025		
6	.2801	.4840	.5363	.4230	.1745		
8	.2516	.4546	.5066	.3938	.1463		
10	0.2227	0.4245	0.4763	0.3641	0.1180		
12	.1935	.3940	.4454	.3340	.0895		
14	.1640	.3629	.4140	.3034	.0609		
16	.1344	.3315	.3820	.2725	.0323		
18	0.1046	0.2996	0.3496	0.2413	0.0036		
20	.0747	.2673	.3168	.2097	.0000		
22	.0447	.2348	.2835	.1779			
24	.0146	.2019	.2500	.1459			

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 70 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6935	0.8505	0.8662	0.7364	0.4958	0.2089	0.0000
22	.6735	.8329	.8488	.7170	.4729	.1817	
20	.6527	.8142	.8304	.6968	.4493	.1542	
18	.6311	.7948	.8109	.6757	.4253	.1269	
16	0.6087	0.7741	0.7905	0.6538	0.4007	0.0989	
14	.5856	.7525	.7691	.6311	.3756	.0710	
12	.5618	.7300	.7467	.6077	.3501	.0430	
10	.5372	.7066	.7235	.5835	.3241	.0149	
8	0.5121	0.6823	0.6993	0.5586	0.2978	0.0000	
6	.4863	.6573	.6743	.5330	.2711		
4	.4600	.6314	.6485	.5067	.2440		
2	.4330	.6048	.6219	.4799	.2167		
0	0.4055	0.5774	0.5946	0.4524	0.1891		
Minus 2	0.3775	0.5493	0.5665	0.4244	0.1612		
4	.3491	.5206	.5377	.3959	.1332		
6	.3202	.4912	.5083	.3669	.1050		
8	.2910	.4612	.4782	.3375	.0767		
10	0.2614	0.4307	0.4476	0.3076	0.0483		
12	.2315	.3997	.4164	.2774	.0198		
14	.2013	.3681	.3848	.2468	.0000		
16	.1709	.3361	.3526	.2160			
18	0.1402	0.3037	0.3200	0.1848			
20	.1094	.2709	.2871	.1535			
22	.0784	.2378	.2537	.1219			
24	.0473	.2044	.2201	.0903			

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 80 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7301	0.8589	0.8451	0.6923	0.4415	0.1599	0.0000
22	.7103	.8411	.8270	.6720	.4175	.1317	
20	.6897	.8222	.8079	.6508	.3929	.1032	
18	.6682	.8026	.7879	.6289	.3678	.0749	
16	0.6459	0.7816	0.7669	0.6061	0.3423	0.0461	
14	.6228	.7597	.7450	.5827	.3164	.0173	
12	.5990	.7370	.7221	.5585	.2901	.0000	
10	.5744	.7134	.6984	.5337	.2634		
8	0.5492	0.6888	0.6738	0.5082	0.2364		
6	.5233	.6635	.6484	.4821	.2091		
4	.4967	.6373	.6222	.4554	.1816		
2	.4695	.6104	.5953	.4281	.1538		
0	0.4417	0.5827	0.5676	0.4004	0.1259		
Minus 2	0.4134	0.5544	0.5392	0.3721	0.0978		
4	.3846	.5253	.5102	.3434	.0695		
6	.3554	.4956	.4806	.3142	.0413		
8	.3257	.4653	.4503	.2847	.0129		
10	0.2956	0.4345	0.4196	0.2549	0.0000		
12	.2652	.4031	.3883	.2247			
14	.2344	.3712	.3565	.1942			
16	.2033	.3389	.3243	.1636			
18	0.1720	0.3061	0.2917	0.1327			
20	.1405	.2730	.2588	.1016			
22	.1088	.2395	.2255	.0704			
24	.0770	.2058	.1920	.0392			

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 90 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7607	0.8634	0.8229	0.6499	0.3908	0.1149	0.0000
22	.7412	.8455	.8044	.6287	.3658	.0859	
20	.7208	.8265	.7848	.6068	.3403	.0566	
18	.6995	.8068	.7643	.5841	.3144	.0276	
16	0.6774	0.7856	0.7429	0.5608	0.2881	0.0000	
14	.6544	.7636	.7205	.5367	.2615		
12	.6306	.7407	.6973	.5120	.2346		
10	.6061	.7170	.6732	.4867	.2073		
8	0.5809	0.6923	0.6483	0.4607	0.1799		
6	.5549	.6668	.6226	.4343	.1522		
4	.5283	.6405	.5962	.4072	.1243		
2	.5010	.6134	.5690	.3797	.0963		
0	0.4730	0.5855	0.5411	0.3517	0.0681		
Minus 2	0.4445	0.5570	0.5126	0.3233	0.0399		
4	.4155	.5278	.4835	.2945	.0116		
6	.3860	.4979	.4537	.2654	.0000		
8	.3560	.4674	.4234	.2359			
10	0.3256	0.4364	0.3927	0.2061			
12	.2947	.4048	.3614	.1761			
14	.2635	.3727	.3297	.1459			
16	.2320	.3402	.2975	.1155			
18	0.1996	0.3073	0.2650	0.0849			
20	.1682	.2739	.2322	.0542			
22	.1360	.2403	.1991	.0235			
24	.1035	.2064	.1658	.0000			

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 100 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7862	0.8650	0.8004	0.6095	0.3436	0.0739	0.0000
22	.7670	.8471	.7814	.5877	.3178	.0441	
20	.7469	.8280	.7615	.5652	.2916	.0142	
18	.7258	.8082	.7406	.5419	.2651	.0000	
16	0.7039	0.7870	0.7189	0.5180	0.2382		
14	.6811	.7649	.6962	.4935	.2111		
12	.6575	.7420	.6727	.4683	.1836		
10	.6330	.7182	.6484	.4426	.1560		
8	0.6079	0.6933	0.6233	0.4164	0.1281		
6	.5820	.6678	.5974	.3896	.1001		
4	.5553	.6414	.5708	.3624	.0720		
2	.5280	.6143	.5435	.3347	.0438		
0	0.5000	0.5863	0.5155	0.3066	0.0156		
Minus 2	0.4714	0.5577	0.4870	0.2782	0.0000		
4	.4422	.5284	.4578	.2494			
6	.4126	.4985	.4281	.2203			
8	.3824	.4679	.3978	.1909			
10	0.3518	0.4368	0.3671	0.1613			
12	.3207	.4051	.3359	.1315			
14	.2892	.3730	.3043	.1016			
16	.2574	.3404	.2723	.0715			
18	0.2253	0.3074	0.2401	0.0413			
20	.1928	.2740	.2075	.0111			
22	.1602	.2402	.1746	.0000			
24	.1273	.2062	.1416				

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 10 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3172	0.6818	0.9244	0.9799	0.8335	0.5244	0.1354
22	.3007	.6708	.9170	.9733	.8247	.5110	.1162
20	.2838	.6589	.9084	.9655	.8149	.4969	.0968
18	.2666	.6462	.8987	.9565	.8041	.4823	.0773
16	0.2490	0.6327	0.8879	0.9463	0.7923	0.4670	0.0577
14	.2312	.6184	.8761	.9350	.7795	.4512	.0381
12	.2130	.6034	.8632	.9226	.7658	.4349	.0183
10	.1946	.5877	.8492	.9090	.7512	.4180	.0000
8	0.1760	0.5712	0.8342	0.8943	0.7356	0.4006	
6	.1571	.5541	.8181	.8786	.7192	.3827	
4	.1381	.5362	.8011	.8617	.7019	.3643	
2	.1189	.5178	.7831	.8438	.6837	.3455	
0	0.0995	0.4986	0.7642	0.8249	0.6647	0.3263	.....
Minus 2	0.0800	0.4789	0.7443	0.8050	0.6448	0.3067	.....
4	.0604	.4586	.7235	.7841	.6242	.2867	
6	.0408	.4377	.7018	.7622	.6029	.2664	
8	.0211	.4163	.6793	.7395	.5808	.2457	
10	0.0014	0.3945	0.6559	0.7158	0.5579	0.2247	
12	.0000	.3721	.6318	.6912	.5345	.2035	
14		.3492	.6069	.6658	.5103	.1820	
16		.3259	.5812	.6396	.4855	.1603	
18		0.3023	0.5548	0.6126	0.4602	0.1384	
20		.2783	.5278	.5849	.4343	.1163	
22		.2539	.5001	.5564	.4078	.0941	
24		.2292	.4718	.5273	.3809	.0718	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 20 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4022	0.7495	0.9558	0.9657	0.7766	0.4392	0.0439
22	.3873	.7398	.9491	.9592	.7673	.4248	.0236
20	.3718	.7291	.9413	.9515	.7569	.4099	.0033
18	.3560	.7175	.9323	.9426	.7458	.3945	.0000
16	0.3397	0.7051	0.9222	0.9326	0.7336	0.3786	
14	.3229	.6919	.9109	.9214	.7206	.3623	
12	.3058	.6777	.8986	.9092	.7067	.3455	
10	.2883	.6628	.8851	.8958	.6920	.3283	
8	0.2705	0.6470	0.8706	0.8813	0.6764	0.3106	
6	.2523	.6305	.8550	.8658	.6600	.2927	
4	.2339	.6132	.8384	.8492	.6427	.2743	
2	.2151	.5951	.8207	.8316	.6247	.2556	
0	0.1961	0.5763	0.8021	0.8129	0.6060	0.2366	
Minus 2	0.1769	0.5568	0.7825	0.7933	0.5865	0.2173	
4	.1574	.5367	.7619	.7727	.5662	.1978	
6	.1377	.5158	.7404	.7512	.5453	.1780	
8	.1179	.4944	.7180	.7287	.5237	.1580	
10	0.0979	0.4724	0.6947	0.7054	0.5015	0.1378	
12	.0778	.4497	.6706	.6812	.4787	.1175	
14	.0577	.4265	.6456	.6561	.4553	.0969	
16	.0374	.4029	.6199	.6303	.4313	.0763	
18	0.0171	0.3787	0.5934	0.6037	0.4069	0.0556	
20	.0000	.3540	.5662	.5764	.3819	.0348	
22		.3289	.5383	.5483	.3564	.0140	
24		.3035	.5097	.5196	.3306	.0000	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 30 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4803	0.8079	0.9773	0.9433	0.7148	0.3532	0.0000
22	.4671	.7995	.9715	.9369	.7051	.3380	
20	.4532	.7901	.9644	.9294	.6944	.3224	
18	.4388	.7798	.9562	.9207	.6829	.3064	
16	0.4239	0.7685	0.9468	0.9109	0.6706	0.2901	
14	.4084	.7563	.9363	.9001	.6574	.2734	
12	.3924	.7431	.9246	.8881	.6435	.2563	
10	.3760	.7291	.9117	.8750	.6288	.2389	
8	0.3591	0.7141	0.8978	0.8609	0.6133	0.2213	
6	.3418	.6983	.8828	.8457	.5970	.2034	
4	.3240	.6817	.8667	.8295	.5800	.1852	
2	.3059	.6642	.8495	.8123	.5624	.1668	
0	0.2873	0.6459	0.8314	0.7941	0.5440	0.1482	
Minus 2	0.2685	0.6268	0.8122	0.7749	0.5250	0.1294	
4	.2493	.6070	.7920	.7548	.5053	.1105	
6	.2298	.5864	.7708	.7337	.4851	.0914	
8	.2100	.5651	.7487	.7118	.4642	.0722	
10	0.1900	0.5431	0.7257	0.6890	0.4427	0.0529	
12	.1697	.5204	.7019	.6654	.4208	.0336	
14	.1493	.4971	.6771	.6409	.3983	.0142	
16	.1286	.4732	.6515	.6157	.3753	.0000	
18	0.1078	0.4488	0.6252	0.5897	0.3519		
20	.0868	.4238	.5980	.5630	.3280		
22	.0658	.3982	.5702	.5356	.3038		
24	.0447	.3722	.5417	.5076	.2791		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 40 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5505	0.8566	0.9898	0.9144	0.6505	0.2689	0.0000
22	.5389	.8495	.9847	.9082	.6404	.2531	
20	.5266	.8415	.9785	.9009	.6295	.2370	
18	.5137	.8324	.9710	.8925	.6178	.2206	
16	0.5001	0.8222	0.9624	0.8830	0.6054	0.2039	
14	.4860	.8111	.9526	.8725	.5923	.1870	
12	.4712	.7990	.9417	.8609	.5784	.1698	
10	.4559	.7859	.9295	.8482	.5638	.1524	
8	0.4400	0.7719	0.9163	0.8345	0.5485	0.1349	
6	.4236	.7569	.9019	.8198	.5326	.1172	
4	.4067	.7410	.8865	.8041	.5160	.0993	
2	.3893	.7242	.8699	.7874	.4988	.0813	
0	0.3714	0.7065	0.8525	0.7697	0.4807	0.0632	
Minus 2	0.3530	0.6880	0.8337	0.7512	0.4625	0.0451	
4	.3343	.6686	.8140	.7317	.4435	.0269	
6	.3151	.6484	.7934	.7113	.4240	.0086	
8	.2955	.6274	.7718	.6900	.4040	.0000	
10	0.2756	0.6056	0.7492	0.6679	0.3835		
12	.2553	.5831	.7258	.6450	.3625		
14	.2348	.5600	.7014	.6213	.3410		
16	.2139	.5360	.6762	.5968	.3192		
18	0.1928	0.5115	0.6502	0.5716	0.2969		
20	.1714	.4863	.6233	.5457	.2743		
22	.1499	.4605	.5957	.5192	.2514		
24	.1281	.4343	.5675	.4920	.2282		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 50 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6120	0.8960	0.9944	0.8808	0.5858	0.1883	0.0000
22	.6020	.8902	.9901	.8749	.5755	.1720	
20	.5913	.8834	.9846	.8679	.5644	.1555	
18	.5799	.8755	.9780	.8598	.5526	.1388	
16	0.5678	0.8665	0.9701	0.8507	0.5402	0.1220	
14	.5549	.8565	.9611	.8405	.5271	.1049	
12	.5414	.8455	.9509	.8293	.5134	.0878	
10	.5273	.8334	.9395	.8171	.4991	.0706	
8	0.5125	0.8203	0.9270	0.8039	0.4841	0.0532	
6	.4970	.8062	.9133	.7897	.4686	.0358	
4	.4810	.7911	.8986	.7746	.4524	.0184	
2	.4644	.7751	.8827	.7585	.4358	.0009	
0	0.4472	0.7581	0.8658	0.7415	0.4186	0.0000	
Minus 2	0.4295	0.7401	0.8478	0.7236	0.4009		
4	.4112	.7213	.8288	.7048	.3827		
6	.3925	.7016	.8088	.6852	.3640		
8	.3733	.6811	.7877	.6647	.3449		
10	0.3536	0.6597	0.7658	0.6434	0.3254		
12	.3335	.6375	.7429	.6213	.3054		
14	.3129	.6145	.7191	.5985	.2851		
16	.2920	.5908	.6944	.5749	.2645		
18	0.2708	0.5664	0.6689	0.5507	0.2435		
20	.2492	.5413	.6425	.5257	.2223		
22	.2273	.5155	.6154	.5002	.2007		
24	.2051	.4891	.5875	.4740	.1790		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 60 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6651	0.9268	0.9925	0.8445	0.5224	0.1127	0.0000
22	.6567	.9223	.9890	.8387	.5119	.0961	
20	.6475	.9167	.9843	.8320	.5008	.0793	
18	.6375	.9100	.9784	.8243	.4890	.0625	
16	0.6267	0.9022	0.9713	0.8155	0.4767	0.0455	
14	.6152	.8932	.9630	.8058	.4638	.0285	
12	.6030	.8832	.9535	.7951	.4503	.0115	
10	.5900	.8721	.9429	.7834	.4362	.0000	
8	0.5762	0.8600	0.9311	0.7707	0.4216		
6	.5618	.8467	.9182	.7571	.4066		
4	.5467	.8325	.9042	.7426	.3910		
2	.5309	.8173	.8891	.7272	.3749		
0	0.5145	0.8010	0.8729	0.7109	0.3584		
Minus 2	0.4974	0.7838	0.8556	0.6937	0.3414		
4	.4798	.7656	.8373	.6757	.3241		
6	.4616	.7465	.8180	.6569	.3063		
8	.4428	.7265	.7977	.6372	.2882		
10	0.4234	0.7056	0.7764	0.6168	0.2697		
12	.4036	.6838	.7541	.5957	.2509		
14	.3832	.6612	.7310	.5738	.2318		
16	.3624	.6378	.7069	.5512	.2123		
18	0.3411	0.6136	0.6820	0.5279	0.1927		
20	.3195	.5887	.6563	.5040	.1728		
22	.2974	.5631	.6297	.4795	.1527		
24	.2750	.5367	.6024	.4544	.1324		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 70 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7102	0.9503	0.9856	0.8068	0.4617	0.0429	0.0000
22	.7033	.9469	.9828	.8013	.4511	.0260	
20	.6955	.9425	.9788	.7949	.4399	.0091	
18	.6869	.9369	.9737	.7875	.4283	.0000	
16	0.6775	0.9301	0.9673	0.7791	0.4161		
14	.6673	.9222	.9598	.7698	.4033		
12	.6562	.9132	.9511	.7596	.3901		
10	.6443	.9031	.9412	.7484	.3764		
8	0.6316	0.8918	0.9301	0.7363	0.3623		
6	.6182	.8795	.9180	.7233	.3477		
4	.6040	.8661	.9047	.7095	.3327		
2	.5891	.8517	.8904	.6947	.3173		
0	0.5735	0.8362	0.8749	0.6792	0.3015		
Minus 2	0.5571	0.8197	0.8584	0.6628	0.2853		
4	.5401	.8022	.8408	.6456	.2688		
6	.5224	.7837	.8222	.6276	.2519		
8	.5041	.7643	.8026	.6088	.2348		
10	0.4852	0.7440	0.7821	0.5893	0.2173		
12	.4657	.7227	.7606	.5691	.1996		
14	.4456	.7006	.7381	.5482	.1817		
16	.4250	.6775	.7147	.5266	.1635		
18	0.4038	0.6537	0.6905	0.5044	0.1451		
20	.3822	.6291	.6655	.4815	.1266		
22	.3601	.6037	.6396	.4581	.1079		
24	.3375	.5776	.6130	.4341	.0891		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 80 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7483	0.9675	0.9751	0.7690	0.4044	0.0000	0.0000
22	.7428	.9653	.9730	.7638	.3938		
20	.7364	.9619	.9697	.7577	.3827		
18	.7291	.9573	.9652	.7506	.3711		
16	0.7209	0.9516	0.9595	0.7427	0.3590		
14	.7118	.9447	.9527	.7338	.3465		
12	.7018	.9366	.9447	.7240	.3337		
10	.6910	.9274	.9356	.7134	.3203		
8	0.6794	0.9171	0.9253	0.7018	0.3066		
6	.6669	.9056	.9139	.6895	.2926		
4	.6536	.8931	.9013	.6763	.2781		
2	.6396	.8794	.8877	.6622	.2634		
0	0.6247	0.8647	0.8730	0.6474	0.2483		
Minus 2	0.6091	0.8489	0.8572	0.6317	0.2329		
4	.5927	.8321	.8404	.6153	.2172		
6	.5756	.8143	.8226	.5982	.2013		
8	.5579	.7955	.8037	.5803	.1851		
10	0.5394	0.7757	0.7839	0.5617	0.1687		
12	.5203	.7550	.7631	.5424	.1521		
14	.5005	.7334	.7414	.5225	.1353		
16	.4801	.7108	.7188	.5019	.1183		
18	0.4592	0.6874	0.6953	0.4808	0.1012		
20	.4377	.6632	.6710	.4590	.0840		
22	.4156	.6382	.6458	.4367	.0666		
24	.3931	.6123	.6199	.4138	.0492		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 90 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7802	0.9798	0.9622	0.7320	0.3510	0.0000	0.0000
22	.7760	.9785	.9607	.7271	.3404		
20	.7708	.9761	.9580	.7213	.3293		
18	.7647	.9725	.9541	.7145	.3179		
16	0.7576	0.9677	0.9491	0.7069	0.3061		
14	.7497	.9617	.9429	.6985	.2939		
12	.7408	.9545	.9356	.6892	.2813		
10	.7310	.9462	.9272	.6791	.2684		
8	0.7203	0.9367	0.9176	0.6681	0.2551		
6	.7087	.9261	.9069	.6563	.2416		
4	.6963	.9143	.8951	.6437	.2277		
2	.6831	.9014	.8821	.6304	.2136		
0	0.6690	0.8875	0.8681	0.6163	0.1992		
Minus 2	0.6540	0.8724	0.8531	0.6014	0.1846		
4	.6383	.8563	.8371	.5857	.1697		
6	.6219	.8391	.8200	.5694	.1547		
8	.6046	.8210	.8019	.5524	.1394		
10	0.5866	0.8018	0.7828	0.5347	0.1240		
12	.5679	.7817	.7628	.5164	.1084		
14	.5485	.7605	.7418	.4974	.0927		
16	.5285	.7385	.7200	.4778	.0769		
18	0.5078	0.7156	0.6973	0.4577	0.0610		
20	.4865	.6918	.6737	.4369	.0450		
22	.4645	.6671	.6492	.4157	.0290		
24	.4421	.6417	.6241	.3939	.0129		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 100 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.8068	0.9880	0.9476	0.6964	0.3016	0.0000	0.0000
22	.8037	.9877	.9467	.6917	.2910		
20	.7997	.9861	.9445	.6861	.2801		
18	.7947	.9834	.9413	.6797	.2688		
16	0.7887	0.9794	0.9369	0.6725	0.2571		
14	.7818	.9743	.9313	.6645	.2452		
12	.7739	.9679	.9246	.6556	.2330		
10	.7650	.9604	.9168	.6460	.2205		
8	0.7553	0.9517	0.9079	0.6355	0.2077		
6	.7446	.9419	.8979	.6243	.1946		
4	.7330	.9309	.8867	.6124	.1813		
2	.7205	.9187	.8745	.5997	.1678		
0	0.7071	0.9055	0.8612	0.5862	0.1541		
Minus 2	0.6929	0.8911	0.8469	0.5721	0.1402		
4	.6778	.8757	.8315	.5572	.1262		
6	.6619	.8592	.8152	.5417	.1119		
8	.6452	.8417	.7978	.5255	.0976		
10	0.6277	0.8231	0.7795	0.5087	0.0831		
12	.6095	.8035	.7602	.4912	.0686		
14	.5905	.7829	.7400	.4731	.0539		
16	.5707	.7614	.7189	.4545	.0392		
18	0.5503	0.7390	0.6969	0.4353	0.0244		
20	.5292	.7156	.6741	.4156	.0096		
22	.5075	.6914	.6504	.3954	.0000		
24	.4851	.6664	.6260	.3747			

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 10 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.2669	0.6530	0.9185	0.9921	0.8542	0.5417	0.1383
22	.2518	.6437	.9132	.9879	.8479	.5307	.1214
20	.2365	.6337	.9068	.9825	.8406	.5192	.1042
18	.2208	.6229	.8992	.9759	.8323	.5070	.0870
16	0.2049	0.6113	0.8906	0.9681	0.8230	0.4941	0.0697
14	.1888	.5989	.8809	.9591	.8126	.4807	.0522
12	.1724	.5858	.8701	.9489	.8013	.4667	.0347
10	.1558	.5721	.8583	.9376	.7890	.4520	.0172
8	0.1390	0.5576	0.8453	0.9252	0.7757	0.4369	0.0000
6	.1220	.5424	.8314	.9116	.7615	.4212	
4	.1049	.5266	.8165	.8969	.7463	.4051	
2	.0877	.5102	.8006	.8811	.7303	.3884	
0	0.0704	0.4931	0.7837	0.8643	0.7133	0.3712	
Minus 2	0.0529	0.4754	0.7658	0.8464	0.6955	0.3536	
4	.0354	.4571	.7470	.8274	.6768	.3355	
6	.0179	.4383	.7273	.8075	.6573	.3171	
8	.0004	.4189	.7067	.7865	.6370	.2983	
10	0.0000	0.3991	0.6853	0.7647	0.6160	0.2791	
12		.3787	.6630	.7418	.5942	.2595	
14		.3579	.6399	.7181	.5716	.2397	
16		.3367	.6160	.6935	.5484	.2195	
18		0.3150	0.5914	0.6681	0.5245	0.1991	
20		.2930	.5660	.6418	.4999	.1785	
22		.2706	.5400	.6147	.4748	.1576	
24		.2479	.5133	.5870	.4490	.1365	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 20 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3029	0.6927	0.9441	0.9898	0.8174	0.4733	0.0496
22	.2909	.6865	.9417	.9880	.8131	.4638	.0338
20	.2785	.6795	.9381	.9850	.8077	.4537	.0179
18	.2658	.6715	.9333	.9808	.8014	.4431	.0020
16	0.2528	0.6629	0.9274	0.9755	0.7941	0.4320	0.0000
14	.2394	.6534	.9204	.9689	.7858	.4203	
12	.2257	.6431	.9123	.9611	.7766	.4081	
10	.2118	.6320	.9030	.9522	.7664	.3954	
8	0.1976	0.6202	0.8926	0.9421	0.7553	0.3823	
6	.1832	.6075	.8812	.9309	.7433	.3687	
4	.1685	.5942	.8687	.9185	.7304	.3546	
2	.1537	.5801	.8551	.9051	.7165	.3401	
0	0.1387	0.5653	0.8405	0.8905	0.7019	0.3251	
Minus 2	0.1235	0.5499	0.8249	0.8748	0.6863	0.3098	
4	.1081	.5337	.8082	.8581	.6699	.2941	
6	.0926	.5169	.7906	.8403	.6527	.2781	
8	.0770	.4995	.7720	.8215	.6347	.2617	
10	0.0613	0.4815	0.7525	0.8017	0.6159	0.2450	
12	.0455	.4629	.7321	.7809	.5964	.2279	
14	.0297	.4437	.7107	.7592	.5762	.2107	
16	.0139	.4240	.6885	.7365	.5552	.1931	
18	0.0000	0.4037	0.6655	0.7130	0.5336	0.1753	
20		.3830	.6416	.6886	.5113	.1573	
22		.3618	.6170	.6633	.4884	.1391	
24		.3402	.5916	.6373	.4649	.1208	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 5.--Sin θ, latitude 34° --continued

Latitude: 34°
Slope: 30 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3349	0.7247	0.9603	0.9785	0.7747	0.4032	0.0000
22	.3259	.7215	.9606	.9791	.7722	.3952	
20	.3165	.7174	.9597	.9785	.7688	.3867	
18	.3067	.7123	.9577	.9767	.7645	.3776	
16	0.2965	0.7066	0.9545	0.9737	0.7592	0.3683	
14	.2860	.6999	.9501	.9695	.7530	.3584	
12	.2751	.6924	.9446	.9642	.7459	.3481	
10	.2639	.6840	.9379	.9577	.7379	.3374	
8	0.2523	0.6748	0.9301	0.9499	0.7289	0.3263	
6	.2404	.6647	.9212	.9411	.7191	.3147	
4	.2283	.6539	.9111	.9311	.7084	.3028	
2	.2159	.6422	.8999	.9199	.6969	.2905	
0	0.2032	0.6298	0.8877	0.9077	0.6845	0.2779	.....
Minus 2	0.1903	0.6166	0.8743	0.8943	0.6713	0.2649	.....
4	.1771	.6027	.8599	.8799	.6572	.2516	
6	.1637	.5880	.8444	.8643	.6424	.2380	
8	.1501	.5726	.8279	.8477	.6267	.2241	
10	0.1363	0.5565	0.8104	0.8301	0.6103	0.2099	
12	.1224	.5397	.7919	.8115	.5932	.1955	
14	.1083	.5223	.7725	.7919	.5753	.1808	
16	.0941	.5042	.7521	.7713	.5568	.1659	
18	0.0798	0.4855	0.7308	0.7498	0.5375	0.1508	
20	.0654	.4663	.7086	.7274	.5176	.1355	
22	.0509	.4464	.6855	.7041	.4971	.1201	
24	.0363	.4260	.6616	.6799	.4760	.1045	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 40 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3625	0.7491	0.9677	0.9600	0.7278	0.3336	0.0000
22	.3564	.7487	.9707	.9628	.7272	.3270	
20	.3499	.7475	.9724	.9644	.7257	.3200	
18	.3429	.7452	.9730	.9649	.7232	.3126	
16	0.3355	0.7423	0.9724	0.9642	0.7199	0.3050	
14	.3277	.7383	.9705	.9623	.7157	.2969	
12	.3196	.7334	.9676	.9593	.7107	.2885	
10	.3110	.7276	.9634	.9550	.7048	.2833	
8	0.3020	0.7210	0.9581	0.9496	0.6980	0.2706	
6	.2927	.7135	.9515	.9431	.6904	.2611	
4	.2830	.7051	.9439	.9354	.6819	.2513	
2	.2729	.6958	.9351	.9266	.6726	.2413	
0	0.2626	0.6857	0.9253	0.9166	0.6625	0.2309	
Minus 2	0.2520	0.6748	0.9140	0.9055	0.6516	0.2202	
4	.2410	.6630	.9018	.8933	.6399	.2093	
6	.2297	.6505	.8885	.8801	.6273	.1981	
8	.2181	.6371	.8741	.8657	.6141	.1867	
10	0.2063	0.6230	0.8587	0.8503	0.6001	0.1750	
12	.1942	.6081	.8422	.8339	.5853	.1631	
14	.1819	.5925	.8247	.8164	.5699	.1512	
16	.1693	.5761	.8062	.7980	.5537	.1388	
18	0.1566	0.5590	0.7867	0.7786	0.5369	0.1264	
20	.1437	.5413	.7662	.7582	.5194	.1138	
22	.1305	.5229	.7448	.7369	.5013	.1011	
24	.1173	.5038	.7225	.7147	.4826	.0883	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 50 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3857	0.7665	0.9678	0.9357	0.6789	0.2661	0.0000
22	.3824	.7688	.9731	.9406	.6799	.2610	
20	.3785	.7702	.9773	.9444	.6802	.2555	
18	.3743	.7705	.9803	.9469	.6795	.2496	
16	0.3696	0.7702	0.9821	0.9484	0.6781	0.2437	
14	.3644	.7688	.9827	.9486	.6758	.2373	
12	.3588	.7665	.9821	.9478	.6727	.2307	
10	.3528	.7632	.9803	.9457	.6688	.2238	
8	0.3463	0.7590	0.9773	0.9425	0.6641	0.2166	
6	.3393	.7539	.9731	.9382	.6586	.2092	
4	.3320	.7479	.9677	.9327	.6523	.2015	
2	.3243	.7409	.9611	.9261	.6451	.1935	
0	0.3162	0.7330	0.9534	0.9183	0.6372	0.1853	
Minus 2	0.3078	0.7243	0.9445	0.9095	0.6285	0.1769	
4	.2989	.7146	.9345	.8995	.6191	.1682	
6	.2896	.7041	.9233	.8884	.6088	.1594	
8	.2800	.6928	.9110	.8763	.5979	.1504	
10	0.2671	0.6806	0.8976	0.8631	0.5862	0.1412	
12	.2598	.6675	.8831	.8488	.5738	.1318	
14	.2493	.6537	.8675	.8335	.5607	.1222	
16	.2384	.6390	.8509	.8172	.5469	.1125	
18	0.2272	0.6236	0.8332	0.7999	0.5325	0.1027	
20	.2158	.6074	.8145	.7816	.5174	.0927	
22	.2040	.5905	.7949	.7623	.5017	.0827	
24	.1921	.5729	.7742	.7422	.4853	.0725	
Declinattion of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 60 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4047	0.7779	0.9619	0.9076	0.6296	0.2022	0.0000
22	.4040	.7826	.9695	.9144	.6321	.1984	
20	.4027	.7865	.9759	.9200	.6340	.1943	
18	.4010	.7892	.9810	.9245	.6350	.1899	
16	0.3987	0.7913	0.9851	0.9279	0.6353	0.1855	
14	.3960	.7923	.9878	.9302	.6348	.1809	
12	.3929	.7923	.9894	.9313	.6336	.1759	
10	.3892	.7913	.9898	.9313	.6315	.1708	
8	0.3850	0.7895	0.9890	0.9302	0.6287	0.1655	
6	.3804	.7866	.9870	.9279	.6252	.1599	
4	.3753	.7827	.9838	.9245	.6209	.1541	
2	.3697	.7780	.9793	.9200	.6158	.1482	
0	0.3638	0.7722	0.9737	0.9143	0.6099	0.1421	
Minus 2	0.3574	0.7655	0.9669	0.9076	0.6033	0.1358	
4	.3505	.7579	.9589	.8997	.5960	.1293	
6	.3433	.7494	.9498	.8907	.5880	.1227	
8	.3355	.7400	.9395	.8807	.5792	.1160	
10	0.3274	0.7296	0.9281	0.8695	0.5698	0.1090	
12	.3189	.7184	.9155	.8574	.5596	.1020	
14	.3100	.7063	.9018	.8441	.5488	.0949	
16	.3007	.6933	.8870	.8299	.5373	.0875	
18	0.2910	0.6795	0.8711	0.8146	0.5251	0.0802	
20	.2810	.6648	.8542	.7983	.5123	.0727	
22	.2707	.6494	.8362	.7811	.4989	.0651	
24	.2600	.6331	.8172	.7629	.4848	.0575	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 5.--Sin θ latitude 34°--continued

Latitude: 34°
Slope: 70 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4200	0.7843	0.9515	0.8772	0.5811	0.1426	0.0000
22	.4217	.7913	.9611	.8856	.5851	.1401	
20	.4227	.7973	.9695	.8930	.5884	.1373	
18	.4233	.8022	.9767	.8993	.5910	.1342	
16	0.4234	0.8065	0.9827	0.9045	0.5929	0.1314	
14	.4230	.8097	.9875	.9085	.5940	.1282	
12	.4220	.8119	.9911	.9115	.5944	.1249	
10	.4205	.8130	.9935	.9133	.5941	.1213	
8	0.4185	0.8133	0.9947	0.9141	0.5931	0.1178	
6	.4160	.8125	.9946	.9137	.5914	.1140	
4	.4130	.8107	.9934	.9122	.5889	.1100	
2	.4095	.8079	.9910	.9096	.5857	.1060	
0	0.4055	0.8041	0.9873	0.9059	0.5818	0.1018	
Minus 2	0.4011	0.7994	0.9825	0.9011	0.5772	0.0975	
4	.3961	.7937	.9764	.8952	.5719	.0930	
6	.3906	.7870	.9691	.8882	.5659	.0885	
8	.3846	.7794	.9607	.8801	.5592	.0838	
10	0.3781	0.7707	0.9511	0.8710	0.5518	0.0791	
12	.3713	.7612	.9404	.8608	.5437	.0742	
14	.3639	.7508	.9285	.8495	.5350	.0693	
16	.3562	.7394	.9154	.8372	.5257	.0642	
18	0.3480	0.7271	0.9013	0.8239	0.5157	0.0591	
20	.3393	.7139	.8861	.8096	.5050	.0539	
22	.3303	.6999	.8697	.7943	.4938	.0487	
24	.3209	.6850	.8524	.7780	.4819	.0434	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 80 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4322	0.7867	0.9380	0.8457	0.5345	0.0877	0.0000
22	.4360	.7957	.9493	.8557	.5397	.0863	
20	.4392	.8038	.9595	.8645	.5444	.0848	
18	.4419	.8106	.9685	.8724	.5483	.0830	
16	0.4440	0.8169	0.9763	0.8791	0.5517	0.0814	
14	.4457	.8221	.9829	.8849	.5543	.0797	
12	.4467	.8262	.9883	.8895	.5562	.0778	
10	.4473	.8293	.9925	.8930	.5575	.0758	
8	0.4472	0.8315	0.9955	0.8955	0.5581	0.0738	
6	.4466	.8325	.9973	.8969	.5580	.0716	
4	.4455	.8326	.9979	.8971	.5573	.0694	
2	.4439	.8317	.9973	.8963	.5558	.0671	
0	0.4417	0.8297	0.9954	0.8944	0.5537	0.0646	
Minus 2	0.4391	0.8268	0.9924	0.8914	0.5509	0.0621	
4	.4358	.8228	.9881	.8873	.5474	.0595	
6	.4320	.8178	.9826	.8821	.5433	.0569	
8	.4276	.8119	.9759	.8759	.5385	.0542	
10	0.4228	0.8049	0.9681	0.8686	0.5330	0.0514	
12	.4174	.7970	.9590	.8602	.5269	.0486	
14	.4116	.7881	.9488	.8508	.5202	.0457	
16	.4052	.7782	.9374	.8403	.5128	.0427	
18	0.3983	0.7674	0.9249	0.8289	0.5048	0.0397	
20	.3910	.7556	.9113	.8164	.4962	.0367	
22	.3832	.7429	.8965	.8029	.4870	.0335	
24	.3749	.7294	.8807	.7884	.4772	.0304	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 90 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4417	0.7862	0.9225	0.8142	0.4903	0.0377	0.0000
22	.4474	.7969	.9353	.8254	.4967	.0373	
20	.4525	.8068	.9471	.8357	.5025	.0369	
18	.4571	.8154	.9576	.8449	.5077	.0362	
16	0.4612	0.8235	0.9670	0.8531	0.5123	0.0359	
14	.4647	.8304	.9753	.8603	.5163	.0354	
12	.4676	.8363	.9823	.8664	.5196	.0349	
10	.4700	.8411	.9882	.8715	.5223	.0343	
8	0.4717	0.8450	0.9928	0.8755	0.5244	0.0337	
6	.4729	.8478	.9963	.8784	.5258	.0330	
4	.4735	.8496	.9985	.8803	.5266	.0323	
2	.4735	.8503	.9995	.8811	.5267	.0315	
0	0.4730	0.8500	0.9992	0.8808	0.5262	0.0307	
Minus 2	0.4720	0.8487	0.9979	0.8794	0.5251	0.0299	
4	.4703	.8463	.9952	.8770	.5233	.0290	
6	.4680	.8429	.9913	.8735	.5209	.0281	
8	.4651	.8385	.9863	.8689	.5179	.0271	
10	0.4617	0.8330	0.9800	0.8633	0.5142	0.0262	
12	.4578	.8266	.9725	.8566	.5099	.0252	
14	.4533	.8191	.9639	.8489	.5049	.0241	
16	.4482	.8106	.9541	.8402	.4994	.0231	
18	0.4426	0.8012	0.9431	0.8304	0.4932	0.0219	
20	.4365	.7907	.9310	.8196	.4865	.0208	
22	.4298	.7793	.9177	.8078	.4791	.0197	
24	.4226	.7670	.9033	.7951	.4712	.0185	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 100 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4490	0.7833	0.9056	0.7832	0.4488		
22	.4564	.7957	.9198	.7956	.4562		
20	.4633	.8072	.9330	.8071	.4631		
18	.4696	.8173	.9450	.8175	.4694		
16	0.4754	0.8270	0.9558	0.8270	0.4752		
14	.4805	.8355	.9655	.8355	.4803		
12	.4851	.8430	.9740	.8429	.4849		
10	.4891	.8494	.9813	.8493	.4889		
8	0.4925	0.8548	0.9874	0.8547	0.4923		
6	.4952	.8592	.9924	.8591	.4951		
4	.4974	.8625	.9961	.8624	.4973		
2	.4990	.8647	.9985	.8646	.4989		
0	0.5000	0.8659	0.9998	0.8658	0.4998	0.0000	
Minus 2	0.5004	0.8661	0.9999	0.8660	0.5002	0.0006	
4	.5002	.8651	.9987	.8650	.4999	.0012	
6	.4993	.8632	.9963	.8631	.4991	.0019	
8	.4978	.8602	.9928	.8601	.4976	.0025	
10	0.4957	0.8561	0.9880	0.8560	0.4955	0.0032	
12	.4931	.8510	.9819	.8509	.4929	.0039	
14	.4898	.8449	.9748	.8447	.4896	.0045	
16	.4859	.8376	.9664	.8375	.4857	.0051	
18	0.4814	0.8295	0.9568	0.8294	0.4813	0.0058	
20	.4764	.8202	.9461	.8201	.4762	.0064	
22	.4707	.8100	.9342	.8099	.4706	.0071	
24	.4646	.7988	.9212	.7987	.4644	.0077	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 10 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.1927	0.5950	0.8894	0.9972	0.8894	0.5950	0.1927
22	.1775	.5857	.8846	.9940	.8846	.5857	.1775
20	.1621	.5758	.8787	.9896	.8787	.5758	.1621
18	.1465	.5652	.8717	.9839	.8717	.5652	.1465
16	0.1306	0.5538	0.8637	0.9771	0.8637	0.5538	0.1306
14	.1147	.5418	.8546	.9691	.8546	.5418	.1147
12	.0985	.5292	.8445	.9599	.8445	.5292	.0985
10	.0823	.5159	.8333	.9495	.8333	.5159	.0823
8	0.0659	0.5020	0.8211	0.9379	0.8211	0.5020	0.0659
6	.0495	.4874	.8080	.9253	.8080	.4874	.0495
4	.0331	.4723	.7938	.9115	.7938	.4723	.0331
2	.0165	.4566	.7787	.8966	.7787	.4566	.0165
0	0.0000	0.4403	0.7626	0.8806	0.7626	0.4403	0.0000
Minus 2	.....	0.4235	0.7456	0.8635	0.7456	0.4235	
4		.4061	.7277	.8454	.7277	.4061	
6		.3883	.7089	.8262	.7089	.3883	
8		.3701	.6892	.8060	.6892	.3701	
10		0.3513	0.6687	0.7849	0.6687	0.3513	
12		.3321	.6474	.7628	.6474	.3321	
14		.3126	.6253	.7397	.6253	.3126	
16		.2926	.6024	.7158	.6024	.2926	
18		0.2723	0.5788	0.6910	0.5788	0.2723	
20		.2516	.5545	.6654	.5545	.2516	
22		.2307	.5295	.6389	.5295	.2307	
24		.2095	.5039	.6117	.5039	.2095	

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 20 percent
Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.1569	0.5783	0.8868	0.9997	0.8868	0.5783	0.1569
22	.1445	.5722	.8853	.9999	.8853	.5722	.1445
20	.1319	.5654	.8827	.9989	.8827	.5654	.1319
18	.1192	.5578	.8791	.9967	.8791	.5578	.1192
16	0.1063	0.5497	0.8744	0.9932	0.8744	0.5497	0.1063
14	.0933	.5409	.8686	.9885	.8686	.5409	.0933
12	.0802	.5314	.8617	.9826	.8617	.5314	.0802
10	.0670	.5213	.8538	.9756	.8538	.5213	.0670
8	0.0537	0.5105	0.8449	0.9673	0.8449	0.5105	0.0537
6	.0403	.4991	.8349	.9579	.8349	.4991	.0403
4	.0269	.4871	.8240	.9473	.8240	.4871	.0269
2	.0134	.4745	.8120	.9355	.8120	.4745	.0134
0	0.0000	0.4613	0.7990	0.9226	0.7990	0.4613	0.0000
Minus 2		0.4476	0.7850	0.9086	0.7850	0.4476	
4		.4333	.7701	.8935	.7701	.4333	
6		.4185	.7543	.8772	.7543	.4185	
8		.4031	.7375	.8599	.7375	.4031	
10		0.3873	0.7199	0.8416	0.7199	0.3873	
12		.3710	.7013	.8223	.7013	.3710	
14		.3543	.6820	.8019	.6820	.3543	
16		.3371	.6617	.7805	.6617	.3371	
18		0.3195	0.6407	0.7583	0.6407	0.3195	
20		.3016	.6189	.7351	.6189	.3016	
22		.2832	.5963	.7109	.5963	.2832	
24		.2645	.5730	.6860	.5730	.2645	

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 30 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.1209	0.5571	0.8763	0.9932	0.8763	0.5571	0.1209
22	.1114	.5540	.8780	.9966	.8780	.5540	.1114
20	.1017	.5503	.8787	.9989	.8787	.5503	.1017
18	.0919	.5457	.8783	.9999	.8783	.5457	.0919
16	0.0820	0.5408	0.8768	0.9997	0.8768	0.5408	0.0820
14	.0719	.5351	.8742	.9983	.8742	.5351	.0719
12	.0618	.5287	.8706	.9957	.8706	.5287	.0618
10	.0517	.5217	.8659	.9919	.8659	.5217	.0517
8	0.0414	0.5141	0.8602	0.9869	0.8602	0.5141	0.0414
6	.0311	.5058	.8534	.9806	.8534	.5058	.0311
4	.0207	.4969	.8456	.9732	.8456	.4969	.0207
2	.0103	.4875	.8367	.9645	.8367	.4875	.0103
0	0.0000	0.4774	0.8269	0.9547	0.8269	0.4774	0.0000
Minus 2		0.4667	0.8160	0.9438	0.8160	0.4667	
4		.4555	.8041	.9317	.8041	.4555	
6		.4437	.7912	.9184	.7912	.4437	
8		.4313	.7774	.9041	.7774	.4313	
10		0.4185	0.7626	0.8886	0.7626	0.4185	
12		.4051	.7469	.8721	.7469	.4051	
14		.3913	.7303	.8545	.7303	.3913	
16		.3769	.7128	.8358	.7128	.3769	
18		0.3621	0.6945	0.8161	0.6945	0.3621	
20		.3469	.6753	.7955	.6753	.3469	
22		.3312	.6552	.7738	.6552	.3312	
24		.3151	.6344	.7513	.6344	.3151	

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 40 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.0859	0.5325	0.8592	0.9789	0.8592	0.5325	0.0859
22	.0792	.5323	.8640	.9854	.8640	.5323	.0792
20	.0723	.5315	.8677	.9907	.8677	.5315	.0723
18	.0653	.5299	.8703	.9949	.8703	.5299	.0653
16	0.0583	0.5279	0.8719	0.9978	0.8719	0.5279	0.0583
14	.0511	.5253	.8724	.9995	.8724	.5253	.0511
12	.0439	.5219	.8719	1.0000	.8719	.5219	.0439
10	.0367	.5179	.8703	.9993	.8703	.5179	.0367
8	0.0294	0.5134	0.8676	0.9973	0.8676	0.5134	0.0294
6	.0221	.5081	.8639	.9942	.8639	.5081	.0221
4	.0147	.5023	.8591	.9898	.8591	.5023	.0147
2	.0073	.4958	.8533	.9842	.8533	.4958	.0073
0	0.0000	0.4887	0.8466	0.9774	0.8466	0.4887	0.0000
Minus 2		0.4810	0.8386	0.9695	0.8386	0.4810	
4		.4728	.8297	.9603	.8297	.4728	
6		.4639	.8197	.9500	.8197	.4639	
8		.4546	.8088	.9385	.8088	.4546	
10		0.4446	0.7969	0.9259	0.7969	0.4446	
12		.4341	.7841	.9121	.7841	.4341	
14		.4232	.7702	.8973	.7702	.4232	
16		.4115	.7554	.8813	.7554	.4115	
18		0.3995	0.7397	0.8643	0.7397	0.3995	
20		.3870	.7232	.8462	.7232	.3870	
22		.3740	.7057	.8271	.7057	.3740	
24		.3605	.6873	.8070	.6873	.3605	

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 50 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.0526	0.5056	0.8371	0.9585	0.8371	0.5056	0.0526
22	.0485	.5082	.8447	.9679	.8447	.5082	.0485
20	.0443	.5101	.8512	.9761	.8512	.5101	.0443
18	.0400	.5112	.8567	.9831	.8567	.5112	.0400
16	0.0357	0.5121	0.8611	0.9889	0.8611	0.5121	0.0357
14	.0313	.5123	.8645	.9934	.8645	.5123	.0313
12	.0269	.5118	.8669	.9968	.8669	.5118	.0269
10	.0225	.5107	.8682	.9990	.8682	.5107	.0225
8	0.0180	0.5090	0.8684	0.9999	0.8684	0.5090	0.0180
6	.0135	.5066	.8676	.9997	.8676	.5066	.0135
4	.0090	.5036	.8657	.9982	.8657	.5036	.0090
2	.0045	.5000	.8627	.9955	.8627	.5000	.0045
0	0.0000	0.4958	0.8587	0.9916	0.8587	0.4958	0.0000
Minus 2	.....	0.4910	0.8537	0.9865	0.8537	0.4910	.....
4		.4855	.8476	.9801	.8476	.4855	
6		.4795	.8405	.9726	.8405	.4795	
8		.4730	.8324	.9639	.8324	.4730	
10		0.4658	0.8232	0.9541	0.8232	0.4658	
12		.4581	.8131	.9430	.8131	.4581	
14		.4498	.8019	.9308	.8019	.4498	
16		.4409	.7898	.9175	.7898	.4409	
18		0.4315	0.7767	0.9031	0.7767	0.4315	
20		.4216	.7627	.8875	.7627	.4216	
22		.4112	.7477	.8709	.7477	.4112	
24		.4003	.7319	.8533	.7319	.4003	

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 60 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.0215	0.4777	0.8116	0.9338	0.8116	0.4777	0.0215
22	.0199	.4828	.8217	.9457	.8217	.4828	.0199
20	.0181	.4873	.8308	.9565	.8308	.4873	.0181
18	.0164	.4909	.8388	.9661	.8388	.4909	.0164
16	0.0146	0.4944	0.8459	0.9745	0.8459	0.4944	0.0146
14	.0128	.4972	.8519	.9817	.8519	.4972	.0128
12	.0110	.4993	.8569	.9878	.8569	.4993	.0110
10	.0092	.5008	.8609	.9926	.8609	.5008	.0092
8	0.0074	0.5018	0.8637	0.9962	0.8637	0.5018	0.0074
6	.0055	.5021	.8656	.9987	.8656	.5021	.0055
4	.0036	.5018	.8664	.9999	.8664	.5018	.0036
2	.0018	.5008	.8661	.9998	.8661	.5008	.0018
0	0.0000	0.4993	0.8648	0.9986	0.8648	0.4993	0.0000
Minus 2		0.4971	0.8624	0.9961	0.8624	0.4971	
4		.4944	.8590	.9925	.8590	.4944	
6		.4910	.8545	.9876	.8545	.4910	
8		.4871	.8490	.9815	.8490	.4871	
10		0.4825	0.8425	0.9742	0.8425	0.4825	
12		.4774	.8349	.9658	.8349	.4774	
14		.4717	.8263	.9561	.8263	.4717	
16		.4653	.8167	.9453	.8167	.4653	
18		0.4585	0.8061	0.9334	0.8061	0.4585	
20		.4511	.7945	.9203	.7945	.4511	
22		.4431	.7820	.9060	.7820	.4431	
24		.4346	.7685	.8907	.7685	.4346	

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 70 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24		0.4497	0.7840	0.9064	0.7840	0.4497	
22		.4570	.7963	.9206	.7963	.4570	
20		.4638	.8077	.9336	.8077	.4638	
18		.4697	.8181	.9456	.8181	.4697	
16		0.4756	0.8276	0.9563	0.8276	0.4756	
14		.4808	.8360	.9659	.8360	.4808	
12		.4853	.8433	.9744	.8433	.4853	
10		.4892	.8497	.9817	.8497	.4892	
8		0.4926	0.8550	0.9877	0.8550	0.4926	
6		.4954	.8593	.9926	.8593	.4954	
4		.4975	.8626	.9962	.8626	.4975	
2		.4990	.8648	.9986	.8648	.4990	
0	0.0000	0.4999	0.8659	0.9998	0.8659	0.4999	0.0000
Minus 2	0.0007	0.5002	0.8660	0.9998	0.8660	0.5002	0.0007
4	.0013	.4999	.8650	.9986	.8650	.4999	.0013
6	.0019	.4990	.8630	.9962	.8630	.4990	.0019
8	.0024	.4975	.8599	.9925	.8599	.4975	.0024
10	0.0030	0.4953	0.8557	0.9877	0.8557	0.4953	0.0030
12	.0036	.4926	.8506	.9816	.8506	.4926	.0036
14	.0042	.4893	.8444	.9743	.8444	.4893	.0042
16	.0047	.4853	.8371	.9659	.8371	.4853	.0047
18	0.0053	0.4808	0.8289	0.9563	0.8289	0.4808	0.0053
20	.0059	.4757	.8196	.9455	.8196	.4757	.0059
22	.0065	.4700	.8093	.9335	.8093	.4700	.0065
24	.0071	.4637	.7981	.9205	.7981	.4637	.0071

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 80 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24		0.4223	0.7555	0.8775	0.7555	0.4223	
22		.4316	.7699	.8937	.7699	.4316	
20		.4405	.7833	.9088	.7833	.4405	
18		.4485	.7958	.9228	.7958	.4485	
16		0.4565	0.8073	0.9357	0.8073	0.4565	
14		.4638	.8179	.9474	.8179	.4638	
12		.4705	.8274	.9580	.8274	.4705	
10		.4766	.8359	.9675	.8359	.4766	
8		0.4822	0.8434	0.9757	0.8434	0.4822	
6		.4871	.8499	.9827	.8499	.4871	
4		.4915	.8554	.9886	.8554	.4915	
2		.4952	.8598	.9933	.8598	.4952	
0	0.0000	0.4983	0.8631	0.9967	0.8631	0.4983	0.0000
Minus 2	0.0029	0.5009	0.8655	0.9989	0.8655	0.5009	0.0029
4	.0057	.5028	.8667	.9999	.8667	.5028	.0057
6	.0085	.5041	.8669	.9997	.8669	.5041	.0085
8	.0113	.5048	.8661	.9983	.8661	.5048	.0113
10	0.0141	0.5049	0.8641	0.9957	0.8641	0.5049	0.0141
12	.0169	.5044	.8612	.9918	.8612	.5044	.0169
14	.0196	.5032	.8572	.9867	.8572	.5032	.0196
16	.0224	.5014	.8521	.9805	.8521	.5014	.0224
18	0.0251	0.4991	0.8460	0.9730	0.8460	0.4991	0.0251
20	.0278	.4961	.8389	.9644	.8389	.4961	.0278
22	.0304	.4925	.8307	.9545	.8307	.4925	.0304
24	.0331	.4883	.8216	.9436	.8216	.4883	.0331

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 90 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24		0.3959	0.7270	0.8482	0.7270	0.3959	
22		.4071	.7431	.8662	.7431	.4071	
20		.4178	.7584	.8831	.7584	.4178	
18		.4276	.7727	.8989	.7727	.4276	
16		0.4375	0.7861	0.9137	0.7861	0.4375	
14		.4467	.7985	.9273	.7985	.4467	
12		.4554	.8100	.9398	.8100	.4554	
10		.4634	.8205	.9512	.8205	.4634	
8		0.4710	0.8299	0.9613	0.8299	0.4710	
6		.4779	.8384	.9704	.8384	.4779	
4		.4842	.8459	.9782	.8459	.4842	
2		.4900	.8523	.9849	.8523	.4900	
0	0.0000	0.4951	0.8576	0.9903	0.8576	0.4951	0.0000
Minus 2	0.0049	0.4997	0.8620	0.9946	0.8620	0.4997	0.0049
4	.0098	.5036	.8653	.9976	.8653	.5036	.0098
6	.0146	.5070	.8675	.9994	.8675	.5070	.0146
8	.0193	.5097	.8686	1.0000	.8686	.5097	.0193
10	0.0241	0.5117	0.8687	0.9994	0.8687	0.5117	0.0241
12	.0289	.5132	.8678	.9976	.8678	.5132	.0289
14	.0336	.5141	.8658	.9945	.8658	.5141	.0336
16	.0383	.5143	.8627	.9903	.8627	.5143	.0383
18	0.0429	0.5139	0.8586	0.9848	0.8586	0.5139	0.0429
20	.0475	.5128	.8534	.9781	.8534	.5128	.0475
22	.0521	.5111	.8472	.9703	.8472	.5111	.0521
24	.0565	.5089	.8400	.9612	.8400	.5089	.0565

Table 5.--Sin θ, latitude 34°--continued

Latitude: 34°
Slope: 100 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	....	0.3709	0.6990	0.8192	0.6990	0.3709	
22		.3836	.7167	.8387	.7167	.3836	
20		.3959	.7336	.8572	.7336	.3959	
18		.4074	.7495	.8746	.7495	.4074	
16		0.4190	0.7646	0.8910	0.7646	0.4190	
14		.4300	.7787	.9063	.7787	.4300	
12		.4403	.7918	.9205	.7918	.4403	
10		.4501	.8041	.9336	.8041	.4501	
8		0.4595	0.8153	0.9455	0.8153	0.4595	
6		.4682	.8255	.9563	.8255	.4682	
4		.4763	.8347	.9659	.8347	.4763	
2		.4838	.8429	.9744	.8429	.4838	
0	0.0000	0.4908	0.8501	0.9816	0.8501	0.4908	0.0000
Minus 2	0.0068	0.4972	0.8563	0.9877	0.8563	0.4972	0.0068
4	.0134	.5029	.8613	.9925	.8613	.5029	.0134
6	.0200	.5081	.8654	.9962	.8654	.5081	.0200
8	.0266	.5126	.8684	.9986	.8684	.5126	.0266
10	0.0331	0.5165	0.8703	0.9999	0.8703	0.5165	0.0331
12	.0397	.5198	.8712	.9999	.8712	.5198	.0397
14	.0464	.5224	.8710	.9986	.8710	.5224	.0464
16	.0526	.5244	.8698	.9962	.8698	.5244	.0526
18	0.0590	0.5257	0.8675	0.9926	0.8675	0.5257	0.0590
20	.0653	.5265	.8641	.9877	.8641	.5265	.0653
22	.0715	.5265	.8597	.9816	.8597	.5265	.0715
24	.0777	.5260	.8542	.9744	.8542	.5260	.0777

Table 6.--Values of Sin θ [1/] for latitude 38°

Latitude: 38°
Slope: 0 percent

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2504	0.6103	0.8738	0.9703	0.8738	0.6103	0.2504
	22	.2306	.5959	.8634	.9613	.8634	.5959	.2306
	20	.2106	.5808	.8518	.9511	.8518	.5808	.2106
	18	.1902	.5650	.8393	.9397	.8393	.5650	.1902
	16	0.1697	0.5484	0.8257	0.9272	0.8257	0.5484	0.1697
	14	.1489	.5312	.8111	.9135	.8111	.5312	.1489
	12	.1280	.5134	.7955	.8988	.7955	.5134	.1280
	10	.1069	.4949	.7790	.8829	.7790	.4949	.1069
	8	0.0857	0.4759	0.7615	0.8660	0.7615	0.4759	0.0857
	6	.0643	.4562	.7431	.8480	.7431	.4562	.0643
	4	.0429	.4360	.7237	.8290	.7237	.4360	.0429
	2	.0215	.4153	.7035	.8090	.7035	.4153	.0215
	0	0.0000	0.3940	0.6824	0.7880	0.6824	0.3940	0.0000
	2		0.3723	0.6605	0.7660	0.6605	0.3723	
	4		.3501	.6378	.7431	.6378	.3501	
	6		.3275	.6143	.7193	.6143	.3275	
	8		.3045	.5901	.6947	.5901	.3045	
	10		0.2811	0.5652	0.6691	0.5652	0.2811	
	12		.2574	.5395	.6428	.5395	.2574	
	14		.2334	.5132	.6157	.5132	.2334	
	16		.2090	.4863	.5878	.4863	.2090	
	18		0.1845	0.4588	0.5592	0.4588	0.1845	
	20		.1597	.4307	.5299	.4307	.1597	
	22		.1347	.4021	.5000	.4021	.1347	
	24		.1095	.3730	.4695	.3730	.1095	

1/ For zero slope Sin θ = Sin A.

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 10 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2811	0.6112	0.8529	0.9414	0.8529	0.6112	0.2811
	22	.2589	.5940	.8393	.9291	.8393	.5940	.2589
	20	.2363	.5760	.8246	.9156	.8246	.5760	.2363
	18	.2135	.5573	.8089	.9010	.8089	.5573	.2135
	16	0.1905	0.5379	0.7922	0.8853	0.7922	0.5379	0.1905
	14	.1672	.5179	.7746	.8685	.7746	.5179	.1672
	12	.1437	.4972	.7560	.8507	.7560	.4972	.1437
	10	.1200	.4759	.7365	.8319	.7365	.4759	.1200
	8	0.0962	0.4541	0.7161	0.8120	0.7161	0.4541	0.0962
	6	.0722	.4317	.6948	.7911	.6948	.4317	.0722
	4	.0482	.4087	.6727	.7693	.6727	.4087	.0482
	2	.0214	.3853	.6497	.7465	.6497	.3853	.0214
	0	0.0000	0.3614	0.6260	0.7228	0.6260	0.3614	0.0000
Minus	2		0.3371	0.6015	0.6983	0.6015	0.3371	
	4		.3123	.5763	.6729	.5763	.3123	
	6		.2872	.5503	.6467	.5503	.2872	
	8		.2617	.5237	.6196	.5237	.2617	
	10		0.2359	0.4965	0.5919	0.4965	0.2359	
	12		.2099	.4686	.5634	.4686	.2099	
	14		.1835	.4402	.5342	.4402	.1835	
	16		.1569	.4113	.5044	.4113	.1569	
	18		0.1302	0.3818	0.4739	0.3818	0.1302	
	20		.1033	.3519	.4429	.3519	.1033	
	22		.0762	.3215	.4113	.3215	.0762	
	24		.0491	.2908	.3793	.2908	.0491	

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 20 percent

Exp: North

Declination of sun (degrees)		Slope time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3084	0.6062	0.8242	0.9040	0.8242	0.6062	0.3084
	22	.2840	.5863	.8080	.8885	.8080	.5863	.2840
	20	.2593	.5657	.7899	.8720	.7899	.5657	.2593
	18	.2343	.5443	.7713	.8544	.7713	.5443	.2343
	16	0.2090	0.5224	0.7517	0.8357	0.7517	0.5224	0.2090
	14	.1834	.4997	.7313	.8160	.7313	.4997	.1834
	12	.1576	.4765	.7099	.7954	.7099	.4765	.1576
	10	.1317	.4527	.6877	.7737	.6877	.4527	.1317
	8	0.1055	0.4283	0.6647	0.7511	0.6647	0.4283	0.1055
	6	.0793	.4035	.6408	.7277	.6408	.4035	.0793
	4	.0529	.3781	.6161	.7033	.6161	.3781	.0529
	2	.0265	.3522	.5907	.6780	.5907	.3522	.0265
	0	0.0000	0.3260	0.5646	0.6520	0.5646	0.3260	0.0000
Minus	2		0.2993	0.5387	0.6251	0.5387	0.2993	
	4		.2723	.5103	.5975	.5103	.2723	
	6		.2449	.4823	.5691	.4823	.2449	
	8		.2173	.4536	.5401	.4536	.2173	
	10		0.1894	0.4244	0.5104	0.4244	0.1894	
	12		.1612	.3946	.4801	.3946	.1612	
	14		.1329	.3644	.4492	.3644	.1329	
	16		.1034	.3337	.4177	.3337	.1034	
	18		0 .0757	0.3027	0.3857	0.3027	0.0757	
	20		.0470	.2712	.3533	.2712	.0470	
	22		.0182	.2395	.3205	.2395	.0182	
	24		.0000	.2074	.2872	.2074	.0000	

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 30 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3319	0.5959	0.7891	0.8599	0.7891	0.5959	0.3319
	22	.3057	.5736	.7697	.8415	.7697	.5736	.3057
	20	.2791	.5507	.7494	.8221	.7494	.5507	.2791
	18	.2522	.5270	.7282	.8018	.7282	.5270	.2522
	16	0.2249	0.5027	0.7060	0.7804	0.7060	0.5027	0.2249
	14	.1974	.4778	.6830	.7581	.6830	.4778	.1974
	12	.1697	.4523	.6592	.7349	.6592	.4523	.1697
	10	.1417	.4263	.6346	.7108	.6346	.4263	.1417
	8	0.1136	0.3997	0.6092	0.6858	0.6092	0.3997	0.1136
	6	.0853	.3727	.5830	.6600	.5830	.3727	.0853
	4	.0569	.3452	.5562	.6334	.5562	.3452	.0569
	2	.0285	.3172	.5286	.6060	.5286	.3172	.0285
	0	0.0000	0.2889	0.5005	0.5779	0.5005	0.2889	0.0000
Minus	2		0.2603	0.4717	0.5490	0.4717	0.2603	
	4		.2313	.4423	.5195	.4423	.2313	
	6		.2020	.4124	.4894	.4124	.2020	
	8		.1725	.3820	.4587	.3820	.1725	
	10		0.1428	0.3511	0.4274	0.3511	0.1428	
	12		.1129	.3198	.3956	.3198	.1129	
	14		.0829	.2881	.3633	.2881	.0829	
	16		.0528	.2561	.3305	.2561	.0528	
	18		0.0226	0.2238	0.2974	0.2238	0.0226	
	20		.0000	.1911	.2639	.1911	.0000	
	22			.1583	.2301	.1583		
	24			.1252	.1960	.1252		

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 40 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3622	0.5813	0.7495	0.8111	0.7495	0.5813	0.3622
	22	.3238	.5570	.7277	.7901	.7277	.5570	.3238
	20	.2956	.5319	.7049	.7683	.7049	.5319	.2956
	18	.2671	.5063	.6813	.7455	.6813	.5063	.2671
	16	0.2382	0.4800	0.6570	0.7217	0.6570	0.4800	0.2382
	14	.2091	.4531	.6318	.6971	.6318	.4531	.2091
	12	.1797	.4257	.6058	.6717	.6058	.4257	.1797
	10	.1501	.3978	.5791	.6454	.5791	.3978	.1501
	8	0.1203	0.3693	0.5517	0.6184	0.5517	0.3693	0.1203
	6	.0903	.3405	.5236	.5906	.5236	.3405	.0903
	4	.0603	.3112	.4948	.5621	.4948	.3112	.0603
	2	.0298	.2815	.4655	.5329	.4655	.2815	.0298
	0	0.0000	0.2515	0.4356	0.5030	0.4356	0.2515	0.0000
Minus	2		0.2212	0.4052	0.4725	0.4052	0.2212	
	4		.1906	.3743	.4415	.3743	.1906	
	6		.1598	.3429	.4099	.3429	.1598	
	8		.1288	.3111	.3778	.3111	.1288	
	10		0.0976	0.2789	0.3453	0.2789	0.0976	
	12		.0663	.2464	.3123	.2464	.0663	
	14		.0349	.2135	.2790	.2135	.0349	
	16		.0035	.1805	.2453	.1805	.0035	
	18		0.0000	0.1472	0.2113	0.1472	0.0000	
	20			.1137	.1771	.1137		
	22			.0801	.1426	.0801		
	24			.0464	.1080	.0464		

Table 6.--Sin θ, latitude 38° --continued

Latitude: 38°
Slope: 50 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3673	0.5635	0.7071	0.7597	0.7071	0.5635	0.3673
	22	.3383	.5374	.6832	.7365	.6832	.5374	.3383
	20	.3089	.5107	.6584	.7125	.6584	.5107	.3089
	18	.2791	.4833	.6328	.6875	.6328	.4833	.2791
	16	0.2489	0.4553	0.6065	0.6618	0.6065	0.4553	0.2489
	14	.2185	.4268	.5794	.6350	.5794	.4268	.2185
	12	.1878	.3978	.5516	.6079	.5516	.3978	.1878
	10	.1568	.3683	.5231	.5798	.5231	.3683	.1568
	8	0.1257	0.3383	0.4940	0.5510	0.4940	0.3383	0.1257
	6	.0944	.3080	.4643	.5215	.4643	.3080	.0944
	4	.0630	.2772	.4340	.4914	.4340	.2772	.0630
	2	.0315	.2461	.4032	.4607	.4032	.2461	.0315
	0	0.0000	0.2147	0.3719	0.4295	0.3719	0.2147	0.0000
Minus	2		0.1831	0.3402	0.3977	0.3402	0.1831	
	4		.1512	.3081	.3655	.3081	.1512	
	6		.1192	.2755	.3327	.2755	.1192	
	8		.0870	.2426	.3003	.2426	.0870	
	10		0.0547	0.2095	0.2661	0.2095	0.0547	
	12		.0223	.1761	.2323	.1761	.0223	
	14		.0000	.1424	.1983	.1424	.0000	
	16			.1086	.1639	.1086		
	18			0.0747	0.1294	0.0747		
	20			.0407	.0947	.0407		
	22			.0066	.0599	.0066		
	24			.0000	.0251	.0000		

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 60 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3796	0.5436	0.6636	0.7076	0.6636	0.5436	0.3796
	22	.3496	.5161	.6379	.6825	.6379	.5161	.3496
	20	.3192	.4879	.6113	.6565	.6113	.4879	.3192
	18	.2884	.4591	.5841	.6299	.5841	.4591	.2884
	16	0.2573	0.4298	0.5561	0.6023	0.5561	0.4298	0.2573
	14	.2258	.3999	.5274	.5741	.5274	.3999	.2258
	12	.1941	.3696	.4981	.5452	.4981	.3696	.1941
	10	.1621	.3388	.4682	.5156	.4682	.3388	.1621
	8	0.1299	0.3076	0.4377	0.4854	0.4377	0.3076	0.1299
	6	.0976	.2761	.4067	.4545	.4067	.2761	.0976
	4	.0651	.2441	.3752	.4232	.3752	.2441	.0651
	2	.0326	.2119	.3433	.3913	.3433	.2119	.0326
	0	0.0000	0.1795	0.3109	0.3590	0.3109	0.1795	0.0000
Minus	2		0.1468	0.2781	0.3262	0.2781	0.1468	
	4		.1139	.2450	.2930	.2450	.1139	
	6		.0809	.2116	.2594	.2116	.0809	
	8		.0478	.1779	.2256	.1779	.0478	
	10		0.0147	0.1441	0.1914	0.1441	0.0147	
	12		.0000	.1100	.1571	.1100	.0000	
	14			.0758	.1225	.0758		
	16			.0416	.0878	.0416		
	18			0.0072	0.0530	0.0072		
	20			.0000	.0181	.0000		
	22				.0000			
	24							

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 70 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3879	0.5226	0.6204	0.6562	0.6204	0.5226	0.3879
22	.3582	.4938	.5931	.6294	.5931	.4938	.3582
20	.3271	.4645	.5651	.6019	.5651	.4645	.3271
18	.2955	.4346	.5364	.5737	.5364	.4346	.2955
16	0.2636	0.4042	0.5071	0.5447	0.5071	0.4042	0.2636
14	.2313	.3733	.4771	.5152	.4771	.3733	.2313
12	.1988	.3419	.4466	.4849	.4466	.3419	.1988
10	.1661	.3101	.4155	.4541	.4155	.3101	.1661
8	0.1331	0.2779	0.3839	0.4227	0.3839	0.2779	0.1331
6	.1000	.2454	.3519	.3909	.3519	.2454	.1000
4	.0667	.2127	.3194	.3585	.3194	.2127	.0667
2	.0334	.1795	.2865	.3257	.2865	.1795	.0334
0	0.0000	0.1463	0.2533	0.2925	0.2533	0.1463	0.0000
Minus 2		0.1128	0.2198	0.2589	0.2198	0.1128	
4		.0792	.1860	.2251	.1860	.0792	
6		.0000	.1520	.1909	.1520	.0000	
8			.1178	.1566	.1178		
10			0.0834	0.1220	0.0834		
12			.0490	.0873	.0490		
14			.0144	.0525	.0144		
16			.0000	.0176	.0000		
18				0.0000			
20							
22							
24							

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 80 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3958	0.5011	0.5783	0.6065	0.5783	0.5011	0.3958
22	.3645	.4715	.5498	.5784	.5498	.4715	.3645
20	.3328	.4412	.5206	.5496	.5206	.4412	.3328
18	.3007	.4104	.4907	.5201	.4907	.4104	.3007
16	0.2682	0.3791	0.4603	0.4900	0.4603	0.3791	0.2682
14	.2354	.3473	.4293	.4593	.4293	.3473	.2354
12	.2023	.3151	.3977	.4280	.3977	.3151	.2023
10	.1690	.2826	.3657	.3962	.3657	.2826	.1690
8	0.1354	0.2497	0.3333	0.3639	0.3333	0.2497	0.1354
6	.1017	.2165	.3004	.3312	.3004	.2165	.1017
4	.0679	.1830	.2672	.2981	.2672	.1830	.0679
2	.0340	.1493	.2337	.2645	.2337	.1493	.0340
0	0.0000	0.1153	0.1998	0.2307	0.1998	0.1153	0.0000
Minus 2		0.0813	0.1658	0.1966	0.1658	0.0813	
4		.0472	.1315	.1623	.1315	.0472	
6		.0130	.0970	.1278	.0970	.0130	
8		.0000	.0625	.0931	.0625	.0000	
10			0.0278	0.0583	0.0278		
12			.0000	.0234	.0000		
14				.0000			
16							
18							
20							
22							
24							

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 90 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4005	0.4793	0.5381	0.5584	0.5381	0.4793	0.4005
22	.3689	.4488	.5085	.5301	.5085	.4488	.3689
20	.3368	.4178	.4783	.5001	.4783	.4178	.3368
18	.3043	.3863	.4475	.4697	.4475	.3863	.3043
16	0.2714	0.3544	0.4162	0.4386	0.4162	0.3544	0.2714
14	.2382	.3220	.3843	.4069	.3843	.3220	.2382
12	.2047	.2892	.3520	.3748	.3520	.2892	.2047
10	.1710	.2560	.3193	.3422	.3193	.2560	.1710
8	0.1371	0.2226	0.2862	0.3092	0.2862	0.2226	0.1371
6	.1029	.1889	.2527	.2759	.2527	.1889	.1029
4	.0687	.1549	.2189	.2421	.2189	.1549	.0687
2	.0344	.1208	.1849	.2081	.1849	.1208	.0344
0	0.0000	0.0865	0.1506	0.1739	0.1506	0.0865	0.0000
Minus 2		0.0521	0.1161	0.1394	0.1161	0.0521	
4		.0176	.0815	.1047	.0815	.0176	
6		.0000	.0468	.0700	.0468	.0000	
8			.0121	.0351	.0121		
10			0.0000	0.0002	0.0000		
12				.0000			
14							
16							
18							
20							
22							
24							

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 100 percent

Exp: North

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4037	0.4594	0.5001	0.5151	0.5001	0.4594	0.4037
22	.3718	.4283	.4697	.4848	.4697	.4283	.3718
20	.3395	.3963	.4387	.4540	.4387	.3963	.3395
18	.3067	.3647	.4071	.4226	.4071	.3647	.3067
16	0.2736	0.3322	0.3750	0.3907	0.3750	0.3322	0.2736
14	.2398	.2993	.3425	.3584	.3425	.2993	.2398
12	.2064	.2660	.3096	.3256	.3096	.2660	.2064
10	.1724	.2324	.2763	.2924	.2763	.2324	.1724
8	0.1381	0.1985	0.2427	0.2588	0.2427	0.1985	0.1381
6	.1037	.1643	.2087	.2249	.2087	.1643	.1037
4	.0692	.1300	.1745	.1908	.1745	.1300	.0692
2	.0346	.0955	.1401	.1564	.1401	.0955	.0346
0	0.0000	0.0609	0.1055	0.1219	0.1055	0.0609	0.0000
Minus 2		0.0263	0.0708	0.0871	0.0708	0.0263	
4		.0000	.0361	.0523	.0361	.0000	
6			.0012	.0175	.0012		
8			.0000	.0000	.0000		
10							
12							
14							
16							
18							
20							
22							
24							

Table 6.--Sin θ latitude 38°--continued

Latitude: 38°
Slope: 10 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure) 0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3360	0.6657	0.8899	0.9485	0.8257	0.5544	0.2345
22	.3155	.6502	.8705	.9371	.8125	.5372	.1850
20	.2946	.6338	.8644	.9246	.7983	.5193	.1624
18	.2733	.6167	.8500	.9110	.7831	.5007	.1394
16	0.2518	0.5987	0.8346	0.8962	0.7670	0.4816	0.1165
14	.2299	.5801	.8182	.8804	.7500	.4619	.0933
12	.2077	.5608	.8008	.8635	.7320	.4416	.0701
10	.1853	.5408	.7825	.8455	.7132	.4208	.0467
8	0.1626	0.5201	0.7631	0.8265	0.6934	0.3984	0.0233
6	.1398	.4987	.7428	.8065	.6729	.3776	.0000
4	.1168	.4769	.7217	.7856	.6515	.3553	
2	.0936	.4544	.6996	.7637	.6293	.3326	
0	0.0704	0.4313	0.6767	0.7408	0.6064	0.3095	
Minus 2	0.0470	0.4077	0.6530	0.7170	0.5827	0.2859	
4	.0236	.3837	.6285	.6924	.5583	.2621	
6	.0001	.3591	.6031	.6669	.5332	.2379	
8	.0000	.3342	.5771	.6406	.5075	.2135	
10		0.3088	0.5504	0.6135	0.4811	0.1887	
12		.2830	.5230	.5857	.4542	.1638	
14		.2569	.4950	.5572	.4267	.1387	
16		.2305	.4664	.5279	.3987	.1133	
18		0.2038	0.4372	0.4981	0.3702	0.0879	
20		.1768	.4074	.4676	.3413	.0623	
22		.1497	.3772	.4366	.3119	.0367	
24		.1223	.3465	.4050	.2822	.0110	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 20 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure) 0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4167	0.7137	0.8971	0.9179	0.7704	0.4942	0.1633
22	.3957	.6971	.8838	.9044	.7552	.4744	.1385
20	.3742	.6797	.8684	.8897	.7380	.4539	.1135
18	.3522	.6614	.8524	.8740	.7205	.4329	.0884
16	0.3298	0.6423	0.8354	0.8572	0.7021	0.4114	0.0632
14	.3070	.6225	.8173	.8394	.6828	.3894	.0379
12	.2839	.6019	.7983	.8205	.6627	.3669	.0126
10	.2604	.5805	.7783	.8007	.6417	.3440	.0000
8	0.2366	0.5585	0.7573	0.7799	0.6200	0.3206	
6	.2124	.5358	.7355	.7581	.5975	.2969	
4	.1881	.5124	.7127	.7354	.5744	.2727	
2	.1635	.4883	.6891	.7118	.5505	.2483	
0	0.1387	0.4638	0.6646	0.6873	0.5259	0.2236	
Minus 2	0.1137	0.4386	0.6393	0.6620	0.5007	0.1985	
4	.0885	.4129	.6132	.6359	.4749	.1735	
6	.0634	.3869	.5863	.6090	.4485	.1478	
8	.0381	.3600	.5589	.5815	.4216	.1222	
10	0.0128	0.3329	0.5307	0.5531	0.3941	0.0964	
12	.0000	.3054	.5018	.5241	.3662	.0704	
14		.2775	.4723	.4944	.3378	.0445	
16		.2483	.4423	.4642	.3090	.0174	
18		0.2207	0.4117	0.4334	0.2799	0.0000	
20		.1919	.3807	.4020	.2503		
22		.1629	.3491	.3702	.2205		
24		.1337	.3171	.3379	.1905		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 30 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4906	0.7533	0.8960	0.8802	0.7103	0.4317	0.1193
22	.4693	.7360	.8807	.8647	.6923	.4097	.0925
20	.4474	.7177	.8643	.8482	.6734	.3870	.0655
18	.4249	.6985	.8470	.8306	6537	.3638	.0385
16	0.4020	0.6785	0.8285	0.8120	0.6332	0.3402	0.0114
14	.3785	.6576	.8091	.7924	.6119	.3161	.0000
12	.3546	.6361	.7887	.7718	.5899	.2917	
10	.3303	.6136	.7673	.7503	.5672	.2670	
8	0.3056	0.5904	0.7450	0.7279	0.5438	0.2419	
6	.2805	.5665	.7217	.7046	.5197	.2165	
4	.2550	.5419	.6976	.6805	.4949	.1908	
2	.2292	.5167	.6727	.6555	.4696	.1650	
0	0.2032	0.4908	0.6469	0.6297	0.4437	0.1389	
Minus 2	0.1769	0.4643	0.6203	0.6031	0.4173	0.1126	
4	.1504	.4373	.5930	.5758	.3903	.0862	
6	.1237	.4097	.5650	.5479	.3629	.0597	
8	.0969	.3817	.5363	.5192	.3351	.0332	
10	0.0699	0.3531	0.5069	0.4899	0.3068	0.0066	
12	.0429	.3242	.4769	.4600	.2781	.0000	
14	.0158	.2948	.4463	.4296	.2492		
16	.0000	.2651	.4152	.3986	.2199		
18		0.2351	0.3835	0.3672	0.1903		
20		.2048	.3515	.3353	.1605		
22		.1742	.3189	.3029	.1305		
24		.1434	.2860	.2703	.1004		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 40 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5566	0.7848	0.8876	0.8374	0.6477	0.3693	0.0768
22	.5351	.7668	.8711	.8201	.6276	.3450	.0482
20	.5131	.7478	.8535	.8019	.6067	.3204	.0195
18	.4903	.7279	.8349	.7827	.5852	.2953	.0000
16	0.4670	0.7072	0.8153	0.7625	0.5629	0.2699	
14	.4432	.6855	.7947	.7414	.5399	.2442	
12	.4187	.6631	.7731	.7194	.5163	.2182	
10	.3938	.6398	.7506	.6965	.4920	.1919	
8	0.3684	0.6158	0.7272	0.6728	0.4671	0.1654	
6	.3425	.5910	.7029	.6482	.4417	.1386	
4	.3163	.5655	.6777	.6229	.4157	.1117	
2	.2896	.5391	.6517	.5973	.3893	.0847	
0	0.2626	0.5124	0.6249	0.5700	0.3623	0.0576	
Minus 2	0.2353	0.4849	0.5974	0.5425	0.3349	0.0303	
4	.2077	.4569	.5691	.5143	.3071	.0031	
6	.1798	.4282	.5401	.4855	.2789	.0000	
8	.1517	.3991	.5105	.4561	.2504		
10	0.1234	0.3694	0.4802	0.4261	0.2216		
12	.0950	.3393	.4494	.3957	.1925		
14	.0665	.3088	.4179	.3647	.1632		
16	.0378	.2780	.3861	.3333	.1337		
18	0.0092	0.2467	0.3537	0.3015	0.1040		
20	.0000	.2152	.3209	.2693	.0742		
22		.1833	.2877	.2368	.0443		
24		.1515	.2542	.2040	.0143		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 50 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6142	0.8085	0.8734	0.7914	0.5845	0.3082	0.0364
22	.5928	.7901	.8559	.7726	.5627	.2822	.0064
20	.5707	.7706	.8373	.7529	.5401	.2559	.0000
18	.5479	.7502	.8177	.7323	.5170	.2293	
16	0.5244	0.7289	0.7971	0.7108	0.4931	0.2024	
14	.5003	.7067	.7756	.6883	.4687	.1753	
12	.4756	.6837	.7531	.6653	.4438	.1479	
10	.4503	.6598	.7297	.6413	.4183	.1204	
8	0.4245	0.6351	0.7054	0.6165	0.3922	0.0927	
6	.3981	.6096	.6802	.5910	.3657	.0649	
4	.3713	.5834	.6542	.5647	.3388	.0370	
2	.3439	.5565	.6275	.5377	.3114	.0091	
0	0.3162	0.5289	0.5999	0.5101	0.2837	0.0000	
Minus 2	0.2881	0.5007	0.5716	0.4819	0.2556		
4	.2597	.4718	.5426	.4531	.2272		
6	.2309	.4424	.5130	.4237	.1985		
8	.2018	.4125	.4827	.3938	.1696		
10	0.1725	0.3820	0.4519	0.3635	0.1405		
12	.1430	.3511	.4205	.3327	.1112		
14	.1133	.3197	.3885	.3015	.0817		
16	.0835	.2880	.3562	.2699	.0522		
18	0.0536	0.2559	0.3234	0.2380	0.0226		
20	.0236	.2235	.2902	.2058	.0000		
22	.0000	.1908	.2566	.1734			
24		.1579	.2227	.1407			

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 60 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6637	0.8255	0.8549	0.7440	0.5225	0.2499	0.0000
22	.6425	.8067	.8005	.7240	.4992	.2225	
20	.6205	.7869	.8172	.7031	.4753	.1948	
18	.5977	.7662	.7968	.6813	.4508	.1669	
16	0.5743	0.7445	0.7755	0.6588	0.4257	0.1388	
14	.5501	.7219	.7532	.6354	.4002	.1105	
12	.5252	.6985	.7299	.6112	.3741	.0821	
10	.4997	.6742	.7059	.5863	.3476	.0536	
8	0.4736	0.6490	0.6809	0.5607	0.3206	0.0251	
6	.4470	.6231	.6551	.5344	.2933	.0000	
4	.4197	.5964	.6285	.5075	.2656		
2	.3920	.5690	.6012	.4799	.2376		
0	0.3638	0.5409	0.5731	0.4517	0.2091		
Minus 2	0.3720	0.5122	0.5443	0.4230	0.1808		
4	.3061	.4828	.5149	.3938	.1520		
6	.2767	.4528	.4848	.3641	.1230		
8	.2469	.4223	.4542	.3340	.0939		
10	0.2168	0.3913	0.4229	0.3034	0.0647		
12	.1865	.3597	.3912	.2725	.0354		
14	.1559	.3278	.3590	.2412	.0060		
16	.1252	.2954	.3264	.2097	.0000		
18	0.0943	0.2627	0.2933	0.1779			
20	.0633	.2297	.2599	.1459			
22	.0321	.1964	.2262	.1137			
24	.0010	.1628	.1923	.0813			

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 70 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7026	0.8368	0.8336	0.6968	0.4631	0.1951	0.0000
22	.6846	.8178	.8145	.6757	.4386	.1666	
20	.6628	.7978	.7945	.6538	.4135	.1378	
18	.6403	.7769	.7735	.6311	.3879	.1089	
16	0.6169	0.7550	0.7516	0.6077	0.3618	0.0798	
14	.5928	.7321	.7287	.5835	.3353	.0479	
12	.5679	.7084	.7050	.5586	.3084	.0214	
10	.5424	.6839	.6804	.5330	.2811	.0000	
8	0.5162	0.6584	0.6550	0.5067	0.2534		
6	.4894	.6322	.6287	.4799	.2255		
4	.4620	.6053	.6018	.4524	.1973		
2	.4340	.5775	.5741	.4244	.1688		
0	0.4055	0.5491	0.5456	0.3959	0.1401		
Minus 2	0.3765	0.5200	0.5165	0.3669	0.1113		
4	.3470	.4903	.4868	.3375	.0823		
6	.3172	.4600	.4565	.3076	.0532		
8	.2869	.4291	.4256	.2774	.0241		
10	0.2563	0.3977	0.3943	0.2468	0.0000		
12	.2253	.3658	.3624	.2160			
14	.1941	.3335	.3300	.1848			
16	.1627	.3007	.2974	.1535			
18	0.1311	0.2676	0.2643	0.1219			
20	.0992	.2342	.2309	.0903			
22	.0673	.2005	.1972	.0585			
24	.0353	.1665	.1633	.0266			

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 80 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure) 0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7407	0.8434	0.8105	0.6508	0.4070	0.1445	0.0000
22	.7200	.8244	.7910	.6289	.3814	.1150	
20	.6986	.8043	.7705	.6061	.3554	.0853	
18	.6762	.7832	.7490	.5827	.3289	.0556	
16	0.6531	0.7612	0.7266	0.5585	0.3020	0.0258	
14	.6291	.7383	.7034	.5337	.2747	.0000	
12	.6044	.7145	.6792	.5082	.2472		
10	.5789	.6897	.6543	.4821	.2193		
8	0.5528	0.6642	0.6285	0.4554	0.1911		
6	.5259	.6378	.6020	.4281	.1627		
4	.4985	.6107	.5748	.4004	.1341		
2	.4704	.5828	.5469	.3721	.1054		
0	0.4417	0.5542	0.5183	0.3434	0.0765		
Minus 2	0.4125	0.5250	0.4890	0.3143	0.0476		
4	.3828	.4951	.4592	.2847	.0185		
6	.3527	.4646	.4288	.2549	.0000		
8	.3221	.4335	.3978	.2247			
10	0.2911	0.4019	0.3664	0.1942			
12	.2597	.3698	.3346	.1636			
14	.2281	.3373	.3023	.1327			
16	.1962	.3043	.2697	.1016			
18	0.1640	0.2710	0.2368	0.0704			
20	.1316	.2373	.2034	.0392			
22	.0991	.2034	.1700	.0079			
24	.0664	.1679	.1363	.0000			

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 90 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7699	0.8458	0.7868	0.6068	0.3547	0.0973	0.0000
22	.7496	.8267	.7668	.5841	.3282	.0671	
20	.7285	.8067	.7459	.5607	.3014	.0367	
18	.7065	.7856	.7241	.5367	.2742	.0064	
16	0.6836	0.7636	0.7104	0.5120	0.2467	0.0000	
14	.6599	.7406	.6778	.4866	.2189		
12	.6353	.7168	.6535	.4607	.1908		
10	.6100	.6921	.6283	.4342	.1624		
8	0.5840	0.6665	0.6023	0.4072	0.1339		
6	.5572	.6401	.5757	.3797	.1052		
4	.5298	.6130	.5483	.3517	.0764		
2	.5017	.5851	.5202	.3233	.0475		
0	0.4730	0.5565	0.4916	0.2945	0.0188		
Minus 2	0.4438	0.5271	0.4623	0.2653	0.0000		
4	.4139	.4972	.4324	.2358			
6	.3837	.4660	.4021	.2061			
8	.3529	.4356	.3712	.1761			
10	0.3216	0.4039	0.3399	0.1456			
12	.2901	.3718	.3082	.1154			
14	.2581	.3392	.2760	.0849			
16	.2258	.3062	.2436	.0542			
18	0.1933	0.2728	0.2109	0.0235			
20	.1605	.2391	.1779	.0000			
22	.1275	.2051	.1447				
24	.0944	.1709	.1113				

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 100 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7941	0.8468	0.7699	0.5651	0.3062	0.0556	0.0000
22	.7743	.8278	.7427	.5419	.2791	.0248	
20	.7535	.8073	.7215	.5180	.2517	.0000	
18	.7318	.7867	.6995	.4935	.2239		
16	0.7092	0.7647	0.6765	0.4683	0.1959		
14	.6858	.7418	.6528	.4426	.1676		
12	.6615	.7179	.6282	.4163	.1391		
10	.6364	.6933	.6029	.3896	.1105		
8	0.6105	0.6677	0.5769	0.3624	0.0817		
6	.5839	.6413	.5501	.3347	.0528		
4	.5567	.6142	.5227	.3066	.0239		
2	.5286	.5863	.4946	.2782	.0000		
0	0.5000	0.5577	0.4660	0.2494			
Minus 2	0.4708	0.5284	0.4367	0.2203			
4	.4409	.4985	.4070	.1909			
6	.4106	.4679	.3767	.1613			
8	.3797	.4369	.3460	.1315			
10	0.3484	0.4052	0.3149	0.1016			
12	.3166	.3731	.2834	.0715			
14	.2845	.3405	.2514	.0413			
16	.2520	.3075	.2193	.0111			
18	0.2193	0.2741	0.1869	0.0000			
20	.1862	.2404	.1542				
22	.1529	.2064	.1214				
24	.1195	.1722	.0884				

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 10 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3401	0.6860	0.9150	0.9655	0.8241	0.5286	0.1583
22	.3217	.6729	.9052	.9565	.8130	.5131	.1372
20	.3030	.6589	.8944	.9463	.8009	.4969	.1160
18	.2839	.6441	.8825	.9350	.7878	.4802	.0947
16	0.2645	0.6285	0.8694	0.9226	0.7738	0.4629	0.0732
14	.2447	.6122	.8554	.9090	.7588	.4450	.0517
12	.2247	.5951	.8402	.8943	.7429	.4266	.0301
10	.2044	.5773	.8241	.8786	.7261	.4076	.0084
8	0.1838	0.5588	0.8070	0.8617	0.7084	0.3872	0.0000
6	.1630	.5396	.7888	.8438	.6899	.3682	
4	.1420	.5198	.7698	.8249	.6705	.3479	
2	.1208	.4993	.7497	.8050	.6503	.3271	
0	0.0995	0.4782	0.7288	0.7841	0.6293	0.3059	
Minus 2	0.0781	0.4565	0.7070	0.7622	0.6075	0.2843	
4	.0564	.4343	.6843	.7395	.5850	.2624	
6	.0349	.4116	.6607	.7158	.5618	.2402	
8	.0133	.3883	.6365	.6912	.5379	.2176	
10	0.0000	0.3646	0.6114	0.6658	0.5134	0.1949	
12		.3404	.5855	.6396	.4882	.1718	
14		.3158	.5589	.6126	.4624	.1486	
16		.2908	.5317	.5849	.4361	.1252	
18		0.2655	0.5038	0.5564	0.4092	0.1016	
20		.2399	.4753	.5273	.3818	.0779	
22		.2139	.4463	.4975	.3540	.0541	
24		.1877	.4166	.4671	.3257	.0303	
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 20 percent

Exp: East
Exp: West

Declination of sun (degrees)		Solar time (east exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4247	0.7537	0.9465	0.9515	0.7673	0.4433	0.0664
	22	.4080	.7419	.9380	.9426	.7562	.4269	.0443
	20	.3908	.7291	.9275	.9326	.7432	.4099	.0222
	18	.3731	.7155	.9163	.9214	.7297	.3925	.0000
	16	0.3549	0.7011	0.9039	0.9092	0.7154	0.3745	.
	14	.3363	.6857	.8905	.8958	.7002	.3561	
	12	.3173	.6696	.8760	.8813	.6842	.3373	
	10	.2980	.6526	.8604	.8658	.6673	.3181	
	8	0.2782	0.6348	0.8438	0.8492	0.6496	0.2984	
	6	.2581	.6163	.8261	.8316	.6311	.2784	
	4	.2378	.5969	.8075	.8129	.6119	.2581	
	2	.2171	.5769	.7879	.7933	.5919	.2374	
	0	0.1961	0.5562	0.7663	0.7727	0.5711	0.2165	
Minus	2	0.1749	0.5348	0.7457	0.7512	0.5497	0.1953	
	4	.1533	.5127	.7233	.7287	.5276	.1739	
	6	.1319	.4900	.6999	.7054	.5049	.1522	
	8	.1102	.4668	.6757	.6812	.4815	.1304	
	10	0.0883	0.4429	0.6508	0.5661	0.4576	0.1084	
	12	.0663	.4185	.6250	.6303	.4331	.0863	
	14	.0442	.3936	.5984	.6037	.4081	.0640	
	16	.0221	.3673	.5711	.5764	.3826	.0407	
	1							
	18	0.0000	0.3424	0.5431	0.5483	0.3566	0.0194	
	20		.3162	.5145	.5196	.3302	.0000	
	22		.2895	.4852	.4903	.3034		
	24		.2626	.4554	.4603	.2762		
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (west exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 30 percent

Exp: East
Exp: West

Declination of sun (degrees)		Solar time (east exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.5024	0.8119	0.9683	0.9294	0.7057	0.3573	0.0000
	22	.4873	.8015	.9602	.9207	.6938	.3401	
	20	.4717	.7902	.9509	.9109	.6809	.3225	
	18	.4555	.7778	.9405	.9001	.6673	.3045	
	16	0.4388	0.7645	0.9290	0.8881	0.6528	0.2861	
	14	.4215	.7503	.9163	.8750	.6375	.2674	
	12	.4037	.7352	.9025	.8609	.6215	.2483	
	10	.3854	.7191	.8876	.8457	.6046	.2290	
	8	0.3666	0.7022	0.8717	0.8295	0.5871	0.2093	
	6	.3474	.6845	.8546	.8123	.5688	.1895	
	4	.3278	.6658	.8365	.7941	.5499	.1694	
	2	.3077	.6464	.8174	.7749	.5303	.1491	
	0	0.2873	0.6263	0.7973	0.7548	0.5100	0.1285	
Minus	2	0.2666	0.6053	0.7763	0.7336	0.4891	0.1078	
	4	.2455	.5836	.7543	.7118	.4676	.0871	
	6	.2241	.5612	.7313	.6890	.4455	.0662	
	8	.2025	.5381	.7075	.6654	.4229	.0452	
	10	0.1806	0.5143	0.6828	0.6409	0.3998	0.0241	
	12	.1585	.4899	.6573	.6157	.3762	.0031	
	14	.1362	.4650	.6310	.5897	.3522	.0000	
	16	.1141	.4394	.6039	.5630	.3277		
	18	0.0911	0.4134	0.5761	0.5356	0.3028		
	20	.0683	.3868	.5476	.5075	.2775		
	22	.0455	.3597	.5184	.4789	.2519		
	24	.0227	.3323	.4885	.4497	.2261		
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (west exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 40 percent

Exp: East
Exp: West

Declination of sun (degrees)		Solar time (east exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.5718	0.8605	0.9810	0.9009	0.6417	0.2729	0.0000
	22	.5585	.8515	.9738	.8925	.6295	.2551	
	20	.5445	.8417	.9654	.8830	.6164	.2370	
	18	.5299	.8305	.9559	.8725	.6027	.2187	
	16	0.5146	0.8184	0.9451	0.8609	0.5881	0.2000	
	14	.4987	.8053	.9333	.8482	.5729	.1812	
	12	.4821	.7913	.9203	.8345	.5570	.1621	
	10	.4650	.7763	.9061	.8198	.5404	.1428	
	8	0.4473	0.7603	0.8909	0.8041	0.5231	0.1233	
	6	.4291	.7434	.8746	.7874	.5052	.1037	
	4	.4104	.7257	.8572	.7697	.4867	.0840	
	2	.3911	.7070	.8388	.7517	.4676	.0641	
	0	0.3714	0.6875	0.8193	0.7317	0.4479	0.0442	
Minus	2	0.3512	0.6671	0.7989	0.7113	0.4277	0.0242	
	4	.3306	.6459	.7775	.6900	.4070	.0042	
	6	.3096	.6239	.7551	.6679	.3857	.0000	
	8	.2882	.6012	.7318	.6450	.3640		
	10	0.2665	0.5778	0.7076	0.6213	0.3419		
	12	.2444	.5536	.6826	.5968	.3193		
	14	.2221	.5287	.6567	.5716	.2964		
	16	.1994	.5033	.6300	.5457	.2730		
	18	0.1766	0.4771	0.6026	0.5192	0.2494		
	20	.1535	.4505	.5744	.4920	.2254		
	22	.1302	.4233	.5455	.4642	.2012		
	24	.1068	.3955	.5160	.4359	.1767		

Declination of sun (degrees)	Solar time (west exposure)						
	1800	1600	1400	1200	1000	0800	0600

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 50 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6325	0.8997	0.9859	0.8679	0.5773	0.1921	0.0000
22	.6209	.8921	.9795	.8598	.5649	.1739	
20	.6086	.8834	.9720	.8507	.5518	.1555	
18	.5955	.8737	.9633	.8405	.5380	.1370	
16	0.5817	0.8628	0.9535	0.8293	0.5236	0.1183	
14	.5671	.8509	.9424	.8169	.5085	.0994	
12	.5519	.8380	.9303	.8039	.4928	.0804	
10	.5360	.8241	.9169	.7897	.4765	.0613	
8	0.5195	0.8091	0.9025	0.7746	0.4597	0.0421	
6	.5023	.7932	.8870	.7585	.4422	.0229	
4	.4845	.7763	.8704	.7415	.4243	.0036	
2	.4662	.7585	.8527	.7236	.4058	.0000	
0	0.4472	0.7397	0.8340	0.7048	0.3868		
Minus 2	0.4277	0.7200	0.8143	0.6852	0.3673		
4	.4077	.6995	.7935	.6647	.3474		
6	.3872	.6781	.7719	.6434	.3271		
8	.3662	.6559	.7492	.6213	.3064		
10	0.3448	0.6329	0.7257	0.5985	0.2853		
12	.3229	.6091	.7013	.5749	.2638		
14	.3007	.5845	.6760	.5507	.2421		
16	.2781	.5593	.6499	.5257	.2200		
18	0.2552	0.5333	0.6230	0.5002	0.1977		
20	.2319	.5067	.5954	.4740	.1751		
22	.2084	.4796	.5670	.4472	.1523		
24	.1846	.4518	.5379	.4199	.1294		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 60 percent

Exp: East
Exp: West

Declination of sun (degrees)		Solar time (east exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.6847	0.9304	0.9843	0.8320	0.5143	0.1663	0.0000
	22	.6748	.9241	.9789	.8243	.5018	.0979	
	20	.6640	.9167	.9722	.8155	.4887	.0793	
	18	.6525	.9082	.9643	.8058	.4750	.0607	
	16	0.6401	0.8986	0.9553	0.7951	0.4607	0.0420	
	14	.6269	.8879	.9451	.7834	.4459	.0232	
	12	.6130	.8761	.9338	.7707	.4305	.0044	
	10	.5983	.8632	.9213	.7571	.4146	.0000	
	8	0.5829	0.8493	0.9077	0.7426	0.3982		
	6	.5669	.8343	.8930	.7272	.3813		
	4	.5501	.8183	.8772	.7109	.3640		
	2	.5326	.8014	.8603	.6937	.3462		
	0	0.5145	0.7834	0.8424	0.6757	0.3279		
Minus	2	0.4957	0.7645	0.8235	0.6569	0.3093		
	4	.4764	.7447	.8035	.6372	.2903		
	6	.4565	.7239	.7826	.6168	.2710		
	8	.4360	.7023	.7607	.5957	.2513		
	10	0.4150	0.6799	0.7379	0.5738	0.2313		
	12	.3935	.6565	.7143	.5512	.2110		
	14	.3715	.6324	.6896	.5279	.1905		
	16	.3490	.6075	.6643	.5040	.1697		
	18	0.3262	0.5819	0.6381	0.4795	0.1487		
	20	.3029	.5556	.6111	.4544	.1276		
	22	.2793	.5286	.5833	.4287	.1063		
	24	.2553	.5010	.5549	.4026	.0849		
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (west exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 70 percent

Exp: East
Exp: West

Declination of sun (degrees)	Slope time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7259	0.9537	0.9778	0.7949	0.4539	0.0463	0.0000
22	.7206	.9487	.9731	.7875	.4415	.0277	
20	.7114	.9425	.9673	.7791	.4284	.0091	
18	.7013	.9352	.9603	.7698	.4149	.0000	
16	0.6903	0.9267	0.9521	0.7596	0.4008		
14	.6785	.9171	.9427	.7484	.3863		
12	.6658	.9064	.9322	.7363	.3713		
10	.6523	.8945	.9205	.7233	.3558		
8	0.6381	0.8816	0.9078	0.7095	0.3399		
6	.6230	.8676	.8939	.6947	.3236		
4	.6073	.8526	.8789	.6792	.3069		
2	.5907	.8365	.8629	.6628	.2898		
0	0.5735	0.8194	0.8458	0.6456	0.2723		
Minus 22	0.5555	0.8013	0.8277	0.6276	0.2546		
4	.5369	.7822	.8086	.6088	.2365		
6	.5176	.7622	.7884	.5893	.2181		
8	.4977	.7413	.7674	.5691	.1995		
10	0.4772	0.7194	0.7457	0.5482	0.1806		
12	.4561	.6966	.7225	.5266	.1615		
14	.4344	.6731	.6986	.5044	.1423		
16	.4122	.6486	.6740	.4815	.1228		
18	0.3895	0.6234	0.6485	0.4581	0.1031		
20	.3664	.5975	.6223	.4341	.0834		
22	.3428	.5708	.5953	.4096	.0636		
24	.3187	.5434	.5675	.3846	.0437		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 80 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7662	0.9708	0.9677	0.7577	0.3970	0.0000	0.0000
22	.7593	.9670	.9638	.7506	.3846		
20	.7514	.9619	.9587	.7427	.3717		
18	.7427	.9557	.9524	.7338	.3583		
16	0.7330	0.9483	0.9450	0.7240	0.3445		
14	.7224	.9398	.9364	.7134	.3303		
12	.7110	.9301	.9267	.7018	.3157		
10	.6987	.9192	.9159	.6895	.3007		
8	0.6855	0.9073	0.9039	0.6763	0.2853		
6	.6715	.8943	.8909	.6622	.2696		
4	.6567	.8801	.8767	.6474	.2535		
2	.6411	.8649	.8615	.6317	.2372		
0	0.6247	0.8487	0.8452	0.6153	0.2206		
Minus 2	0.6075	0.8314	0.8279	0.5982	0.2037		
4	.5896	.8131	.8096	.5803	.1865		
6	.5710	.7938	.7903	.5617	.1691		
8	.5517	.7735	.7701	.5424	.1515		
10	0.5317	0.7523	0.7489	0.5225	0.1337		
12	.5111	.7302	.7268	.5019	.1158		
14	.4898	.7071	.7038	.4807	.0978		
16	.4680	.6833	.6800	.4590	.0795		
18	0.4456	0.6586	0.6553	0.4367	0.0612		
20	.4226	.6331	.6297	.4138	.0427		
22	.3991	.6068	.6036	.3904	.0244		
24	.3751	.5718	.5766	.3666	.0059		
Declination of sun (degrees)	0600	0800	1000	1200	1400	1600	1800
	Solar time (west exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 90 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7973	0.9822	0.9551	0.7212	0.3439	0.0000	0.0000
22	.7917	.9794	.9519	.7145	.3316		
20	.7851	.9754	.9475	.7069	.3189		
18	.7776	.9703	.9419	.6985	.3057		
16	0.7692	0.9639	0.9353	0.6892	0.2922		
14	.7598	.9564	.9274	.6790	.2783		
12	.7495	.9477	.9185	.6681	.2641		
10	.7383	.9378	.9084	.6563	.2496		
8	0.7261	0.9268	0.8972	0.6437	0.2348		
6	.7131	.9147	.8849	.6303	.2197		
4	.6993	.9015	.8716	.6162	.2043		
2	.6845	.8871	.8572	.6013	.1886		
0	0.6690	0.8717	0.8417	0.5857	0.1728		
Minus 2	0.6526	0.8553	0.8253	0.5694	0.1567		
4	.6354	.8377	.8078	.5524	.1404		
6	.6175	.8176	.7893	.5347	.1240		
8	.5988	.7997	.7698	.5163	.1074		
10	0.5793	0.7792	0.7495	0.4974	0.0907		
12	.5592	.7577	.7282	.4778	.0739		
14	.5384	.7353	.7059	.4576	.0570		
16	.5169	.7120	.6830	.4369	.0399		
18	0.4948	0.6879	0.6591	0.4156	0.0229		
20	.4721	.6629	.6345	.3939	.0058		
22	.4488	.6371	.6090	.3716	.0000		
24	.4250	.6105	.5828	.3489			
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 100 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.8231	0.9910	0.9409	0.6861	0.2949	0.0000	0.0000
22	.8187	.9892	.9383	.6797	.2827		
20	.8134	.9857	.9347	.6725	.2700		
18	.8070	.9819	.9297	.6645	.2572		
16	0.7997	0.9765	0.9237	0.6556	0.2440		
14	.7914	.9698	.9166	.6460	.2305		
12	.7822	.9620	.9084	.6355	.2167		
10	.7720	.9530	.8990	.6243	.2026		
8	0.7608	0.9429	0.8886	0.6124	0.1883		
6	.7487	.9316	.8770	.5997	.1738		
4	.7358	.9192	.8644	.5862	.1591		
2	.7219	.9056	.8508	.5721	.1441		
0	0.7071	0.8910	0.8361	0.5572	0.1290		
Minus 2	0.6915	0.8752	0.8204	0.5417	0.1137		
4	.6750	.8584	.8037	.5255	.0983		
6	.6577	.8406	.7860	.5087	.0828		
8	.6397	.8217	.7674	.4912	.0672		
10	0.6208	0.8019	0.7478	0.4731	0.0515		
12	.6011	.7810	.7273	.4545	.0357		
14	.5808	.7592	.7059	.4353	.0199		
16	.5597	.7365	.6837	.4156	.0040		
18	0.5380	0.7128	0.6607	0.3954	0.0000		
20	.5156	.6883	.6368	.3747			
22	.4925	.6630	.6121	.3536			
24	.4689	.6369	.5868	.3320			
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 10 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)		Solar time (southeast exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2909	0.6602	0.9134	0.9825	0.8491	0.5489	0.1623
	22	.2740	.6488	.9057	.9759	.8405	.5358	.1435
	20	.2567	.6366	.8970	.9681	.8309	.5221	.1245
	18	.2391	.6236	.8871	.9591	.8202	.5077	.1053
	16	0.2212	0.6098	0.8762	0.9489	0.8086	0.4927	0.0859
	14	.2031	.5953	.8642	.9376	.7959	.4771	.0665
	12	.1847	.5801	.8512	.9252	.7823	.4609	.0470
	10	.1660	.5642	.8371	.9116	.7678	.4442	.0275
	8	0.1472	0.5476	0.8220	0.8969	0.7523	0.4269	0.0079
	6	.1282	.5303	.8059	.8811	.7359	.4091	.0000
	4	.1091	.5124	.7888	.8643	.7186	.3908	
	2	.0898	.4937	.7707	.8464	.7004	.3720	
	0	0.0704	0.4747	0.7517	0.8274	0.6814	0.3528	
Minus	2	0.0509	0.4549	0.7318	0.8075	0.6615	0.3331	
	4	.0313	.4346	.7111	.7865	.6409	.3131	
	6	.0117	.4138	.6893	.7647	.6194	.2926	
	8	.0000	.3925	.6669	.7418	.5972	.2718	
	10		0.3707	0.6436	0.7181	0.5743	0.2507	
	12		.3482	.6195	.6935	.5507	.2292	
	14		.3257	.5946	.6681	.5263	.2075	
	16		.3027	.5690	.6418	.5014	.1855	
	18		0.2792	0.5428	0.6147	0.4759	0.1633	
	20		.2555	.5158	.5870	.4497	.1409	
	22		.2313	.4883	.5585	.4230	.1184	
	24		.2070	.4601	.5293	.3959	.0957	
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (southwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 20 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3278	0.7028	0.9433	0.9850	0.8166	0.4833	0.0744
22	.3138	.6944	.9390	.9808	.8104	.4717	.0566
20	.2994	.6851	.9326	.9754	.8023	.4594	.0388
18	.2847	.6751	.9255	.9689	.7936	.4466	.0209
16	0.2696	0.6641	0.9173	0.9611	0.7840	0.4333	0.0030
14	.2542	.6524	.9079	.9522	.7734	.4194	.0000
12	.2384	.6399	.8975	.9421	.7619	.4050	
10	.2224	.6267	.8860	.9309	.7494	.3901	
8	0.2061	0.6126	0.8734	0.9185	0.7360	0.3747	
6	.1896	.5978	.8597	.9051	.7218	.3589	
4	.1728	.5823	.8450	.8905	.7066	.3427	
2	.1559	.5661	.8292	.8748	.6906	.3260	
0	0.1387	0.5491	0.8125	0.8581	0.6738	0.3089	
Minus 2	0.1213	0.5315	0.7947	0.8403	0.6561	0.2915	
4	.1037	.5131	.7760	.8215	.6377	.2737	
6	.0862	.4945	.7563	.8017	.6185	.2554	
8	.0685	.4750	.7357	.7809	.5984	.2371	
10	0.0507	0.4549	0.7143	0.7592	0.5777	0.2184	
12	.0329	.4343	.6919	.7365	.5563	.1994	
14	.0149	.4132	.6687	.7130	.5342	.1802	
16	.0000	.3906	.6447	.6886	.5114	.1597	
18		0.3695	0.6199	0.6633	0.4880	0.1410	
20		.3469	.5944	.6372	.4641	.1212	
22		.3239	.5681	.6104	.4395	.1012	
24		.3006	.5411	.5828	.4144	.0811	
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 30 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)		Solar time (southeast exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3603	0.7375	0.9637	0.9785	0.7780	0.4159	0.0000
	22	.3493	.7320	.9616	.9767	.7732	.4057	
	20	.3379	.7257	.9584	.9737	.7675	.3950	
	18	.3260	.7185	.9541	.9695	.7608	.3838	
	16	0.3137	0.7105	0.9485	0.9642	0.7532	0.3721	
	14	.3011	.7015	.9419	.9577	.7447	.3601	
	12	.2881	.6918	.9340	.9500	.7353	.3475	
	10	.2747	.6811	.9251	.9411	.7250	.3346	
	8	0.2610	0.6697	0.9150	0.9311	0.7138	0.3212	
	6	.2470	.6574	.9038	.9200	.7017	.3074	
	4	.2327	.6444	.8915	.9077	.6888	.2933	
	2	.2181	.6305	.8781	.8943	.6750	.2788	
	0	0.2032	0.6159	0.8636	0.8799	0.6604	0.2640	
Minus	2	0.1881	0.6005	0.8481	0.8643	0.6450	0.2488	
	4	.1727	.5844	.8315	.8478	.6288	.2334	
	6	.1572	.5676	.8139	.8302	.6119	.2176	
	8	.1414	.5501	.7954	.8115	.5942	.2016	
	10	0.1255	0.5319	0.7759	0.7919	0.5758	0.1854	
	12	.1094	.5131	.7554	.7713	.5567	.1689	
	14	.0932	.4937	.7340	.7498	.5369	.1522	
	16	.0769	.4736	.7117	.7274	.5164	.1353	
	18	0.0649	0.4531	0.6886	0.7041	0.4953	0.1183	
	20	.0440	.4318	.6646	.6799	.4737	.1011	
	22	.0275	.4101	.6398	.6549	.4514	.0838	
	24	.0109	.3879	.6142	.6291	.4286	.0664	
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (southwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 40 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3882	0.7641	0.9751	0.9644	0.7351	0.3486	0.0000
22	.3801	.7616	.9757	.9649	.7322	.3399	
20	.3715	.7582	.9751	.9642	.7283	.3307	
18	.3625	.7538	.9734	.9623	.7236	.3212	
16	0.3529	0.7485	0.9704	0.9593	0.7180	0.3112	
14	.3403	.7423	.9663	.9550	.7115	.3009	
12	.3327	.7352	.9610	.9496	.7041	.2903	
10	.3219	.7272	.9545	.9431	.6959	.2792	
8	0.3108	0.7183	0.9469	0.9354	0.6869	0.2679	
6	.2993	.7085	.9381	.9266	.6769	.2561	
4	.2874	.6979	.9282	.9166	.6662	.2441	
2	.2752	.6864	.9171	.9055	.6547	.2320	
0	0.2626	0.6741	0.9049	0.8933	0.6423	0.2192	
Minus 2	0.2497	0.6609	0.8917	0.8801	0.6292	0.2064	
4	.2365	.6470	.8773	.8657	.6153	.1933	
6	.2231	.6323	.8619	.8503	.6007	.1799	
8	.2093	.6168	.8454	.8339	.5853	.1663	
10	0.1953	0.6005	0.8279	0.8164	0.5693	0.1526	
12	.1811	.5835	.8094	.7980	.5525	.1386	
14	.1666	.5658	.7898	.7786	.5351	.1245	
16	.1519	.5475	.7694	.7582	.5169	.1102	
18	0.1371	0.5283	0.7480	0.7369	0.4982	0.0959	
20	.1220	.5087	.7257	.7147	.4789	.0813	
22	.1069	.4884	.7024	.6917	.4589	.0667	
24	.0916	.4669	.6784	.6678	.4385	.0519	
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 50 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)		Solar time (southeast exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4115	0.7837	0.9787	0.9444	0.6898	0.2833	0.0000
	22	.4061	.7839	.9818	.9469	.6886	.2760	
	20	.4003	.7831	.9837	.9484	.6865	.2684	
	18	.3939	.7814	.9844	.9486	.6837	.2605	
	16	0.3871	0.7787	0.9839	0.9478	0.6799	0.2522	
	14	.3798	.7751	.9822	.9455	.6754	.2436	
	12	.3720	.7705	.9793	.9425	.6700	.2347	
	10	.3638	.7650	.9752	.9382	.6638	.2256	
	8	0.3551	0.7585	0.9699	0.9327	0.6568	0.2161	
	6	.3460	.7512	.9635	.9261	.6490	.2065	
	4	.3365	.7429	.9559	.9183	.6404	.1965	
	2	.3266	.7337	.9471	.9095	.6310	.1863	
	0	0.3162	0.7236	0.9371	0.8995	0.6209	0.1759	
Minus	2	0.3055	0.7127	0.9260	0.8884	0.6100	0.1653	
	4	.2944	.7008	.9138	.8763	.5983	.1544	
	6	.2830	.6881	.9005	.8631	.5860	.1434	
	8	.2712	.6746	.8860	.8488	.5729	.1322	
	10	0.2591	0.6603	0.8705	0.8335	0.5591	0.1209	
	12	.2466	.6451	.8539	.8172	.5446	.1094	
	14	.2339	.6292	.8363	.7998	.5296	.0977	
	16	.2209	.6125	.8177	.7816	.5137	.0860	
	18	0.2076	0.5951	0.7981	0.7623	0.4973	0.0741	
	20	.1940	.5769	.7775	.7422	.4803	.0622	
	22	.1803	.5580	.7559	.7211	.4627	.0501	
	24	.1663	.5384	.7335	.6991	.4446	.0381	
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (southwest exposure)						

Table 6.--Sin θ, latitude 38° --continued

Latitude: 38°
Slope: 60 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4305	0.7969	0.9761	0.9200	0.6437	0.2213	0.0000
22	.4277	.7996	.9815	.9245	.6441	.2153	
20	.4244	.8013	.9856	.9279	.6437	.2092	
18	.4205	.8020	.9886	.9302	.6426	.2027	
16	0.4162	0.8018	0.9903	0.9313	0.6406	0.1961	
14	.4113	.8005	.9909	.9313	.6379	.1891	
12	.4060	.7983	.9902	.9302	.6344	.1820	
10	.4002	.7952	.9883	.9279	.6301	.1746	
8	0.3938	0.7910	0.9853	0.9245	0.6250	0.1671	
6	.3870	.7859	.9810	.9200	.6192	.1593	
4	.3797	.7799	.9755	.9143	.6126	.1513	
2	3720	.7729	.9689	.9076	.6053	.1431	
0	0.3638	0.7649	0.9613	0.8997	0.5973	0.1348	
Minus 2	0.3551	0.7560	0.9521	0.8907	0.5885	0.1263	
4	.3461	.7462	.9419	.8807	.5790	.1176	
6	.3366	.7355	.9306	.8695	.5688	.1088	
8	.3267	.7239	.9181	.8573	.5579	.0999	
10	0.3164	0.7114	0.9046	0.8441	0.5463	0.0908	
12	.3057	.6980	.8899	.8299	.5340	.0817	
14	.2946	.6838	.8741	.8146	.5212	.0724	
16	.2832	.6688	.8573	.7983	.5076	.0631	
18	0.2715	0.6529	0.8395	0.7811	0.4935	0.0536	
20	.2593	.6363	.8206	.7629	.4787	.0441	
22	.2469	.6188	.8007	.7438	.4634	.0346	
24	.2342	.6007	.7798	.7238	.4475	.0250	
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 70 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4442	0.8049	0.9687	0.8930	0.5982	0.1633	0.0000
22	.4452	.8099	.9761	.8993	.6001	.1587	
20	.4443	.8138	.9823	.9045	.6012	.1538	
18	.4428	.8168	.9873	.9085	.6016	.1488	
16	0.4407	0.8188	0.9911	0.9115	0.6013	0.1436	
14	.4382	.8198	.9937	.9133	.6002	.1383	
12	.4351	.8197	.9951	.9141	.5985	.1328	
10	.4314	.8187	.9953	.9137	.5959	.1271	
8	0.4273	0.8167	0.9942	0.9122	0.5927	0.1212	
6	.4226	.8137	.9920	.9096	.5887	.1152	
4	.4174	.8097	.9885	.9059	.5840	.1091	
2	.4117	.8047	.9839	.9011	.5786	.1028	
0	0.4055	0.7988	0.9780	0.8952	0.5725	0.0964	
Minus 2	0.3988	0.7918	0.9710	0.8882	0.5657	0.0899	
4	.3916	.7839	.9627	.8801	.5582	.0833	
6	.3840	.7751	.9533	.8710	.5501	.0766	
8	.3758	.7653	.9428	.8608	.5412	.0698	
10	0.3672	0.7545	0.9311	0.8495	0.5317	0.0629	
12	.3582	.7429	.9182	.8372	.5216	.0559	
14	.3487	.7303	.9042	.8239	.5109	.0489	
16	.3389	.7169	.8892	.8096	.4994	.0417	
18	0.3285	0.7026	0.8730	0.7943	0.4874	0.0346	
20	.3178	.6874	.8558	.7780	.4748	.0274	
22	.3067	.6714	.8376	.7608	.4606	.0216	
24	.2953	.6545	.8183	.7426	.4479	.0129	
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 80 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4575	0.8087	0.9577	0.8645	0.5542	0.1098	0.0000
22	.4593	.8157	.9669	.8724	.5574	.1063	
20	.4605	.8217	.9750	.8791	.5599	.1029	
18	.4611	.8267	.9819	.8849	.5618	.0991	
16	0.4639	0.8307	0.9875	0.8895	0.5629	0.0953	
14	.4607	.8337	.9920	.8930	.5634	.0914	
12	.4597	.8357	.9952	.8955	.5632	.0873	
10	.4581	.8367	.9973	.8968	.5623	.0382	
8	0.4559	0.8366	0.9981	0.8971	0.5607	0.0790	
6	.4532	.8355	.9977	.8963	.5584	.0746	
4	.4499	.8334	.9961	.8944	.5555	.0702	
2	.4461	.8303	.9933	.8914	.5519	.0657	
0	0.4417	0.8262	0.9993	0.8873	0.5475	0.0611	
Minus 2	0.4368	0.8211	0.9840	0.8821	0.5426	0.0564	
4	.4314	.8149	.9776	.8759	.5370	.0517	
6	.4254	.8078	.9700	.8686	.5307	.0469	
8	.4190	.7997	.9612	.8602	.5238	.0420	
10	0.4120	0.7906	0.9512	0.8508	0.5162	0.0371	
12	.4045	.7805	.9401	.8403	.5080	.0322	
14	.3965	.7695	.9278	.8288	.4993	.0272	
16	.3881	.7576	.9144	.8164	.4898	.0222	
18	0.3791	0.7448	0.8999	0.8029	0.4798	0.0171	
20	.3697	.7310	.8841	.7884	.4691	.0120	
22	.3599	.7163	.8675	.7730	.4580	.0069	
24	.3496	.6909	.8498	.7566	.4463	.0032	
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 6.--Sin θ, latitude 38° --continued

Latitude: 38°
Slope: 90 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)		Solar time (southeast exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4667	0.8086	0.9444	0.8356	0.5123	0.0601	.0000
	22	.4704	.8175	.9552	.8449	.5167	.0578	
	20	.4735	.8253	.9649	.8532	.5204	.0554	
	18	.4761	.8322	.9735	.8603	.5236	.0530	
	16	0.4781	0.8380	0.9808	0.8664	0.5261	0.0505	
	14	.4795	.8429	.9869	.8714	.5279	.0479	
	12	.4803	.8466	.9919	.8754	.5292	.0452	
	10	.4806	.8494	.9956	.8784	.5297	.0425	
	8	0.4802	0.8511	0.9981	0.8802	0.5297	0.0398	
	6	.4793	.8518	.9994	.8810	.5289	.0370	
	4	.4778	.8515	.9995	.8807	.5276	.0342	
	2	.4757	.8501	.9983	.8794	.5256	.0313	
	0	0.4730	0.8477	0.9960	0.8769	0.5229	0.0284	
Minus	2	0.4698	0.8442	0.9924	0.8735	0.5197	0.0254	
	4	.4660	.8397	.9876	.8689	.5157	.0224	
	6	.4616	.8325	.9816	.8633	.5112	.0200	
	8	.4566	.8277	.9745	.8566	.5060	.0164	
	10	0.4511	0.8202	0.9661	0.8489	0.5003	0.0133	
	12	.4450	.8117	.9566	.8401	.4939	.0103	
	14	.4384	.8021	.9458	.8304	.4869	.0072	
	16	.4313	.7916	.9340	.8196	.4793	.0041	
	18	0.4237	0.7802	0.9210	0.8078	0.4711	0.0010	
	20	.4155	.7678	.9069	.7950	.4624	.0000	
	22	.4068	.7544	.8917	.7813	.4531		
	24	.3976	.7401	.8753	.7666	.4432		
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (southwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 100 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4736	0.8075	0.9296	0.8071	0.4659	0.0163	0.0000
22	.4791	.8180	.9419	.8175	.4783	.0150	
20	.4840	.8270	.9530	.8270	.4832	.0132	
18	.4883	.8359	.9630	.8355	.4875	.0123	
16	0.4920	0.8434	0.9718	0.8429	0.4912	0.0109	
14	.4951	.8498	.9795	.8493	.4943	.0095	
12	.4977	.8552	.9859	.8547	.4968	.0081	
10	.4996	.8596	.9911	.8591	.4987	.0067	
8	0.5009	0.8629	0.9952	0.8624	0.5000	0.0053	
6	.5016	.8651	.9980	.8646	.5007	.0038	
4	.5017	.8663	.9996	.8658	.5008	.0024	
2	.5011	.8665	1.0000	.8660	.5003	.0009	
0	0.5000	0.8655	0.9991	0.8650	0.4991	0.0000	
Minus 2	0.4983	0.8636	0.9971	0.8631	0.4974		
4	.4959	.8605	.9938	.8601	.4950		
6	.4929	.8565	.9893	.8560	.4921		
8	.4894	.8514	.9837	.8509	.4885		
10	0.4852	0.8452	0.9768	0.8447	0.4844		
12	.4805	.8380	.9687	.8375	.4796		
14	.4751	.8298	.9595	.8293	.4744		
16	.4692	.8206	.9491	.8201	.4684		
18	0.4628	0.8104	0.9375	0.8099	0.4619		
20	.4557	.7992	.9247	.7987	.4549		
22	.4481	.7870	.9109	.7866	.4473		
24	.4400	.7739	.8960	.7735	.4392		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 10 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2173	0.6034	0.8861	0.9896	0.8861	0.6034	0.2173
	22	.2001	.5920	.8789	.9839	.8789	.5920	.2001
	20	.1827	.5799	.8707	.9771	.8707	.5799	.1827
	18	.1651	.5671	.8614	.9691	.8614	.5671	.1651
	16	0.1473	0.5535	0.8510	0.9599	0.8510	0.5535	0.1473
	14	.1292	.5394	.8396	.9495	.8396	.5394	.1292
	12	.1117	.5245	.8272	.9379	.8272	.5245	.1117
	10	.0928	.5090	.8137	.9253	.8137	.5090	.0928
	8	0.0743	0.4929	0.7993	0.9115	0.7993	0.4929	0.0743
	6	.0558	.4762	.7839	.8966	.7839	.4762	.0558
	4	.0373	.4589	.7676	.8806	.7676	.4589	.0373
	2	.0186	.4411	.7503	.8635	.7503	.4411	.0186
	0	0.0000	0.4227	0.7321	0.8454	0.7321	0.4227	0.0000
Minus	2		0.4038	0.7130	0.8262	0.7130	0.4038	
	4		.3844	.6931	.8060	.6931	.3844	
	6		.3645	.6722	.7849	.6722	.3645	
	8		.3442	.6506	.7628	.6506	.3442	
	10		0.3235	0.6282	0.7397	0.6282	0.3235	
	12		.3024	.6050	.7158	.6050	.3024	
	14		.2809	.5811	.6910	.5811	.2809	
	16		.2591	.5565	.6654	.5565	.2591	
	18		.2369	.5312	.6389	.5312	.2369	
	20		.2145	.5052	.6117	.5052	.2145	
	22		.1918	.4787	.5837	.4787	.1918	
	24		.1689	.4515	.5550	.4515	.1689	

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 20 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.1827	0.5908	0.8895	0.9989	0.8895	0.5908	0.1827
	22	.1683	.5825	.8862	.9967	.8862	.5825	.1683
	20	.1536	.5734	.8807	.9932	.8807	.5734	.1536
	18	.1388	.5637	.8747	.9885	.8747	.5637	.1388
	16	0.1238	0.5532	0.8676	0.9826	0.8676	0.5532	0.1238
	14	.1087	.5421	.8594	.9756	.8594	.5421	.1087
	12	.0934	.5303	.8502	.9671	.8502	.5303	.0934
	10	.0780	.5179	.8400	.9579	.8400	.5179	.0780
	8	0.0625	0.5049	0.8287	0.9473	0.8287	0.5049	0.0625
	6	.0469	.4912	.8165	.9355	.8165	.4912	.0469
	4	.0313	.4770	.8032	.9226	.8032	.4770	.0313
	2	.0157	.4621	.7890	.9086	.7890	.4621	.0157
	0	0.0000	0.4467	0.7738	0.8935	0.7738	0.4467	0.0000
Minus	2		0.4308	0.7567	0.8772	0.7567	0.4308	
	4		.4143	.7405	.8599	.7405	.4143	
	6		.3973	.7225	.8416	.7225	.3973	
	8		.3799	.7037	.8223	.7037	.3799	
	10		0.3619	0.6840	0.8019	0.6840	0.3619	
	12		.3436	.6635	.7805	.6635	.3436	
	14		.3248	.6421	.7582	.6421	.3248	
	16		.3046	.6200	.7350	.6200	.3046	
	18		0.2861	0.5971	0.7109	0.5971	0.2861	
	20		.2662	.5735	.6859	.5735	.2662	
	22		.2459	.5491	.6601	.5491	.2459	
	24		.2255	.5242	.6335	.5242	.2255	

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 30 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.1477	0.5733	0.8849	0.9989	0.8849	0.5733	0.1477
	22	.1361	.5680	.8842	.9999	.8842	.5680	.1361
	20	.1242	.5620	.8824	.9997	.8824	.5620	.1242
	18	.1123	.5553	.8796	.9983	.8796	.5553	.1123
	16	0.1001	0.5479	0.8757	0.9957	0.8757	0.5479	0.1001
	14	.0879	.5399	.8709	.9919	.8709	.5399	.0879
	12	.0755	.5312	.8648	.9869	.8648	.5312	.0755
	10	.0631	.5219	.8577	.9806	.8577	.5219	.0631
	8	0.0506	0.5119	0.8496	0.9732	0.8496	0.5119	0.0506
	6	.0380	.5013	.8404	.9646	.8404	.5013	.0380
	4	.0253	.4900	.8302	.9548	.8302	.4900	.0253
	2	.0127	.4782	.8191	.9438	.8191	.4782	.0127
	0	0.0000	0.4658	0.8069	0.9317	0.8069	0.4658	0.0000
Minus	2		0.4529	0.7937	0.9185	0.7937	0.4529	
	4		.4394	.7796	.9041	.7796	.4394	
	6		.4253	.7645	.8886	.7645	.4253	
	8		.4108	.7485	.8721	.7485	.4108	
	10		0.3957	0.7315	0.8545	0.7315	0.3957	
	12		.3801	.7133	.8358	.7133	.3801	
	14		.3641	.6950	.8161	.6950	.3641	
	16		.3477	.6755	.7955	.6755	.3477	
	18		0.3281	0.6551	0.7738	0.6551	0.3281	
	20		.3135	.6340	.7513	.6340	.3135	
	22		.2959	.6120	.7278	.6120	.2959	
	24		.2778	.5894	.7034	.5894	.2778	

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 40 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.1135	0.5521	0.8732	0.9907	0.8732	0.5521	0.1135
22	.1045	.5497	.8756	.9949	.8756	.5497	.1045
20	.0954	.5466	.8769	.9978	.8769	.5466	.0954
18	.0862	.5429	.8771	.9995	.8771	.5429	.0862
16	0.0769	0.5384	0.8763	1.0000	0.8763	0.5384	0.0769
14	.0675	.5334	.8744	.9993	.8744	.5334	.0675
12	.0580	.5277	.8715	.9973	.8715	.5277	.0580
10	.0484	.5213	.8675	.9942	.8675	.5213	.0484
8	0.0388	0.5143	0.8624	0.9898	0.8624	0.5143	0.0388
6	.0292	.5067	.8563	.9842	.8563	.5067	.0292
4	.0195	.4984	.8491	.9774	.8491	.4984	.0195
2	.0097	.4896	.8409	.9695	.8409	.4896	.0097
0	0.0000	0.4801	0.8316	0.9603	0.8316	0.4801	0.0000
Minus 2		0.4701	0.8214	0.9500	0.8214	0.4701	
4		.4595	.8102	.9385	.8102	.4595	
6		.4484	.7979	.9259	.7979	.4484	
8		.4367	.7847	.9121	.7847	.4367	
10		0.4244	0.7706	0.8973	0.7706	0.4244	
12		.4177	.7555	.8813	.7555	.4117	
14		.3984	.7395	.8643	.7395	.3984	
16		.3847	.7225	.8462	.7225	.3847	
18		0.3704	0.7047	0.8271	0.7047	0.3704	
20		.3558	.6861	.8070	.6861	.3558	
22		.3407	.6666	.7859	.6666	.3407	
24		.3252	.6463	.7638	.6463	.3252	

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 50 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0806	0.5283	0.8561	0.9761	0.8561	0.5283	0.0806
	22	.0743	.5287	.8613	.9831	.8613	.5287	.0743
	20	.0678	.5283	.8655	.9889	.8655	.5283	.0678
	18	.0613	.5274	.8686	.9934	.8686	.5274	.0613
	16	0.0547	0.5257	0.8706	0.9968	0.8706	0.5257	0.0547
	14	.0480	.5235	.8716	.9988	.8716	.5235	.0480
	12	.0412	.5206	.8715	.9999	.8715	.5206	.0412
	10	.0344	.5171	.8704	.9997	.8704	.5171	.0344
	8	0.0276	0.5129	0.8682	0.9982	0.8682	0.5129	0.0276
	6	.0207	.5081	.8649	.9955	.8649	.5081	.0207
	4	.0138	.5027	.8606	.9916	.8606	.5027	.0138
	2	.0069	.4967	.8552	.9865	.8552	.4967	.0069
	0	0.0000	0.4901	0.8488	0.9801	0.8488	0.4901	0.0000
Minus	2		0.4829	0.8414	0.9726	0.8414	0.4829	
	4		.4751	.8329	.9639	.8329	.4751	
	6		.4667	.8235	.9541	.8235	.4667	
	8		.4577	.8130	.9424	.8130	.4577	
	10		0.4482	0.8015	0.9308	0.8015	0.4482	
	12		.4381	.7891	.9175	.7891	.4381	
	14		.4275	.7757	.9031	.7757	.4275	
	16		.4164	.7613	.8875	.7613	.4164	
	18		0.4048	0.7460	0.8709	0.7460	0.4048	
	20		.3927	.7298	.8532	.7298	.3927	
	22		.3801	.7127	.8345	.7127	.3801	
	24		.3671	.6948	.8148	.6948	.3671	

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 60 percent

Exp: South

Declination of sun (degrees)	Solar time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.0498	0.5031	0.8350	0.9565	0.8350	0.5031	0.0498
22	.0459	.5060	.8428	.9661	.8428	.5060	.0459
20	.0419	.5082	.8496	.9745	.8496	.5082	.0419
18	.0379	.5098	.8553	.9817	.8553	.5098	.0379
16	0.0338	0.5108	0.8600	0.9878	0.8600	0.5108	0.0338
14	.0296	.5111	.8636	.9926	.8636	.5111	.0296
12	.0255	.5109	.8662	.9962	.8662	.5109	.0255
10	.0213	.5100	.8677	.9987	.8677	.5100	.0213
8	0.0171	0.5085	0.8682	0.9999	0.8682	0.5085	0.0171
6	.0128	.5063	.8676	.9998	.8676	.5063	.0128
4	.0085	.5036	.8659	.9986	.8659	.5036	.0085
2	.0043	.5002	.8633	.9961	.8633	.5002	.0043
0	0.0000	0.4962	0.8595	0.9925	0.8595	0.4962	0.0000
Minus 2		0.4917	0.8547	0.9876	0.8547	0.4917	
4		.4865	.8489	.9815	.8489	.4865	
6		.4807	.8420	.9742	.8420	.4807	
8		.4744	.8341	.9657	.8341	.4744	
10		0.4674	0.8252	0.9561	0.8252	0.4674	
12		.4599	.8153	.9453	.8153	.4599	
14		.4519	.8044	.9333	.8044	.4519	
16		.4432	.7924	.9203	.7924	.4432	
18		0.4341	0.7796	0.9060	0.7796	0.4341	
20		.4244	.7658	.8907	.7658	.4244	
22		.4142	.7510	.8743	.7510	.4142	
24		.4035	.7354	.8568	.7354	.4035	

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 70 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0224	0.4775	0.8114	0.9336	0.8114	0.4775	0.0224
	22	.0197	.4826	.8215	.9456	.8215	.4826	.0197
	20	.0179	.4871	.8306	.9563	.8306	.4871	.0179
	18	.0162	.4911	.8387	.9660	.8387	.4911	.0162
	16	0.0145	0.4944	0.8458	0.9744	0.8458	0.4944	0.0145
	14	.0127	.4972	.8518	.9817	.8518	.4972	.0127
	12	.0109	.4993	.8568	.9877	.8568	.4993	.0109
	10	.0091	.5008	.8608	.9926	.8608	.5008	.0091
	8	0.0073	0.5017	0.8637	0.9962	0.8637	0.5017	0.0073
	6	.0055	.5021	.8656	.9986	.8656	.5021	.0055
	4	.0037	.5017	.8664	.9998	.8664	.5017	.0037
	2	.0018	.5008	.8661	.9998	.8661	.5008	.0018
	0	0.0000	0.4993	0.8648	0.9986	0.8648	0.4993	0.0000
Minus	2		0.4972	0.8625	0.9962	0.8625	0.4972	
	4		.4944	.8591	.9925	.8591	.4944	
	6		.4911	.8546	.9877	.8546	.4911	
	8		.4871	.8491	.9816	.8491	.4871	
	10		0.4826	0.8426	0.9743	0.8426	0.4826	
	12		.4775	.8350	.9659	.8350	.4775	
	14		.4718	.8265	.9563	.8265	.4718	
	16		.4655	.8169	.9455	.8169	.4655	
	18		0.4587	0.8063	0.9335	0.8063	0.4587	
	20		.4513	.7947	.9205	.7947	.4513	
	22		.4433	.7822	.9063	.7822	.4433	
	24		.4348	.7687	.8909	.7687	.4348	

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 80 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24		0.4521	0.7864	0.9088	0.7864	0.4521	
	22		.4593	.7986	.9228	.7986	.4593	
	20		.4659	.8098	.9357	.8098	.4659	
	18		.4719	.8200	.9474	.8200	.4719	
	16		0.4774	0.8332	0.9580	0.8332	0.4774	
	14		.4823	.8375	.9675	.8375	.4823	
	12		.4867	.8447	.9757	.8447	.4867	
	10		.4904	.8508	.9827	.8508	.4904	
	8		0.4935	0.8559	0.9886	0.8559	0.4935	
	6		.4960	.8600	.9933	.8600	.4960	
	4		.4979	.8631	.9967	.8631	.4979	
	2		.4993	.8650	.9989	.8650	.4993	
	0	0.0000	0.5000	0.8660	0.9999	0.8660	0.5000	0.0000
Minus	2	0.0004	0.5001	0.8658	0.9997	0.8658	0.5001	0.0004
	4	.0008	.4995	.8647	.9983	.8647	.4995	.0008
	6	.0012	.4984	.8624	.9957	.8624	.4984	.0012
	8	.0016	.4967	.8591	.9918	.8591	.4967	.0016
	10	0.0020	0.4944	0.8548	0.9867	0.8548	0.4944	0.0020
	12	.0024	.4914	.8494	.9805	.8494	.4914	.0024
	14	.0028	.4879	.8431	.9730	.8431	.4879	.0028
	16	.0032	.4838	.8356	.9644	.8356	.4838	.0032
	18	0.0036	0.4791	0.8271	0.9545	0.8271	0.4791	0.0036
	20	.0039	.4737	.8176	.9436	.8176	.4737	.0039
	22	.0043	.4679	.8072	.9314	.8072	.4679	.0043
	24	.0047	.4554	.7958	.9182	.7958	.4554	.0047

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 90 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24		0.4267	0.7609	0.8830	0.7609	0.4267	
	22		.4357	.7750	.8989	.7750	.4357	
	20		.4443	.7880	.9137	.7880	.4443	
	18		.4522	.8001	.9273	.8001	.4522	
	16		0.4597	0.8113	0.9398	0.8113	0.4597	
	14		.4665	.8214	.9511	.8214	.4665	
	12		.4728	.8306	.9613	.8306	.4728	
	10		.4786	.8387	.9703	.8387	.4786	
	8		0.4837	0.8458	0.9782	0.8458	0.4837	
	6		.4883	.8519	.9849	.8519	.4883	
	4		.4922	.8570	.9903	.8570	.4922	
	2		.4956	.8610	.9945	.8610	.4956	
	0	0.0000	0.4983	0.8639	0.9976	0.8639	0.4983	0.0000
Minus	2	0.0024	0.5005	0.8658	0.9994	0.8658	0.5005	0.0024
	4	.0049	.5020	.8667	1.0000	.8667	.5020	.0049
	6	.0073	.5022	.8665	.9994	.8665	.5022	.0073
	8	.0097	.5033	.8652	.9975	.8652	.5033	.0097
	10	0.0121	0.5030	0.8629	0.9945	0.8629	0.5030	0.0121
	12	.0145	.5020	.8595	.9902	.8595	.5020	.0145
	14	.0168	.5005	.8551	.9848	.8551	.5005	.0168
	16	.0192	.4984	.8496	.9781	.8496	.4984	.0192
	18	0.0215	0.4957	0.8431	0.9702	0.8431	0.4957	0.0215
	20	.0238	.4923	.8356	.9612	.8356	.4923	.0238
	22	.0261	.4883	.8271	.9510	.8271	.4883	.0261
	24	.0283	.4838	.8175	.9396	.8175	.4838	.0283

Table 6.--Sin θ, latitude 38°--continued

Latitude: 38°
Slope: 100 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24		0.4038	0.7357	0.8572	0.7357	0.4038	
	22		.4145	.7513	.8746	.7513	.4145	
	20		.4242	.7661	.8910	.7661	.4242	
	18		.4343	.7799	.9063	.7799	.4343	
	16		0.4435	0.7927	0.9205	0.7927	0.4435	
	14		.4521	.8046	.9336	.8046	.4521	
	12		.4601	.8155	.9455	.8155	.4601	
	10		.4676	.8253	.9563	.8253	.4676	
	8		0.4745	0.8343	0.9659	0.8343	0.4745	
	6		.4808	.8421	.9744	.8421	.4808	
	4		.4866	.8490	.9816	.8490	.4866	
	2		.4917	.8548	.9877	.8548	.4917	
	0	0.0000	0.4963	0.8596	0.9925	0.8596	0.4963	0.0000
Minus	2	0.0043	0.5002	0.8633	0.9962	0.8633	0.5002	0.0043
	4	.0085	.5036	.8660	.9986	.8660	.5036	.0085
	6	.0127	.5063	.8676	.9999	.8676	.5063	.0127
	8	.0170	.5084	.8682	.9999	.8682	.5084	.0170
	10	0.0212	0.5099	0.8677	0.9986	0.8677	0.5099	0.0212
	12	.0253	.5108	.8661	.9962	.8661	.5108	.0253
	14	.0295	.5110	.8636	.9925	.8636	.5110	.0295
	16	.0336	.5106	.8599	.9877	.8599	.5106	.0336
	18	0.0377	0.5096	0.8552	0.9816	0.8552	0.5096	0.0377
	20	.0417	.5080	.8494	.9744	.8494	.5080	.0417
	22	.0457	.5058	.8426	.9659	.8426	.5058	.0457
	24	.0496	.5029	.8348	.9563	.8348	.5029	.0496

Table 7.--Values of Sin θ[1/] for latitude 42°

Latitude: 42°
Slope: 0 percent

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2722	0.6116	0.8601	0.9511	0.8601	0.6116	0.2722
	22	.2507	.5952	.8474	.9397	.8474	.5952	.2507
	20	.2289	.5780	.8336	.9272	.8336	.5780	.2289
	18	.2068	.5602	.8189	.9135	.8189	.5602	.2068
	16	0.1844	0.5416	0.8031	0.8988	0.8031	0.5416	0.1844
	14	.1619	.5224	.7863	.8829	.7863	.5224	.1619
	12	.1391	.5026	.7686	.8660	.7686	.5026	.1391
	10	.1162	.4821	.7500	.8481	.7500	.4821	.1162
	8	0.0931	0.4611	0.7304	0.8290	0.7304	0.4611	0.0931
	6	.0699	.4395	.7100	.8090	.7100	.4395	.0699
	4	.0467	.4173	.6887	.7880	.6887	.4173	.0467
	2	.0233	.3947	.6665	.7661	.6665	.3947	.0233
	0	0.0000	0.3716	0.6436	0.7431	0.6436	0.3716	0.0000
Minus	2		0.3480	0.6198	0.7193	0.6198	0.3480	
	4		.3240	.5953	.6946	.5953	.3240	
	6		.2996	.5701	.6691	.5701	.2996	
	8		.2748	.5442	.6428	.5442	.2748	
	10		0.2497	0.5176	0.6157	0.5176	0.2497	
	12		.2243	.4904	.5878	.4904	.2243	
	14		.1987	.4626	.5592	.4626	.1987	
	16		.1727	.4342	.5299	.4342	.1727	
	18		0.1466	0.4053	0.5000	0.4053	0.1466	
	20		.1203	.3759	.4695	.3759	.1203	
	22		.0939	.3461	.4384	.3461	.0939	
	24		.0673	.3158	.4067	.3158	.0673	

1/ For zero slope Sin θ = Sin A.

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 10 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3009	0.6082	0.8332	0.9156	0.8332	0.6082	0.3009
	22	.2771	.5891	.8174	.9010	.8174	.5891	.2771
	20	.2556	.5692	.8006	.8853	.8006	.5692	.2556
	18	.2286	.5486	.7828	.8685	.7828	.5486	.2286
	16	0.2039	0.5273	0.7641	0.8507	0.7641	0.5273	0.2039
	14	.1790	.5054	.7444	.8319	.7444	.5054	.1790
	12	.1538	.4829	.7238	.8120	.7238	.4829	.1538
	10	.1285	.4598	.7023	.7911	.7023	.4598	.1285
	8	0.1029	0.4361	0.6800	0.7693	0.6800	0.4361	0.1029
	6	.0773	.4119	.6569	.7465	.6569	.4119	.0773
	4	.0516	.3872	.6329	.7228	.6329	.3872	.0516
	2	.0258	.3621	.6082	.6983	.6082	.3621	.0258
	0	0.0000	0.3364	0.5827	0.6729	0.5827	0.3364	0.0000
Minus	2		0.3104	0.5566	0.6467	0.5566	0.3104	
	4		.2840	.5297	.6196	.5297	.2840	
	6		.2573	.5023	.5919	.5023	.2573	
	8		.2302	.4741	.5634	.4741	.2302	
	10		0.2029	0.4454	0.5342	0.4454	0.2029	
	12		.1753	.4162	.5044	.4162	.1753	
	14		.1475	.3865	.4739	.3865	.1475	
	16		.1193	.3563	.4429	.3563	.1193	
	18		0.0914	0.3256	0.4114	0.3256	0.0914	
	20		.0631	.2946	.3793	.2946	.0631	
	22		.0348	.2632	.3468	.2632	.0348	
	24		.0065	.2315	.3138	.2315	.0065	

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 20 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3262	0.5990	0.7989	0.8720	0.7989	0.5990	0.3262
	22	.3004	.5774	.7801	.8543	.7801	.5774	.3004
	20	.2743	.5550	.7605	.8357	.7605	.5550	.2743
	18	.2478	.5319	.7399	.8161	.7399	.5319	.2478
	16	0.2210	0.5082	0.7184	0.7954	0.7184	0.5082	0.2210
	14	.1940	.4839	.6961	.7737	.6961	.4839	.1940
	12	.1667	.4589	.6729	.7511	.6729	.4589	.1667
	10	.1392	.4335	.6488	.7277	.6488	.4335	.1392
	8	0.1116	0.4074	0.6240	0.7033	0.6240	0.4074	0.1116
	6	.0838	.3809	.5984	.6780	.5984	.3809	.0838
	4	.0559	.3539	.5721	.6520	.5721	.3539	.0559
	2	.0280	.3265	.5451	.6251	.5451	.3265	.0280
	0	0.0000	0.2987	0.5174	0.5975	0.5174	0.2987	0.0000
Minus	2		0.2706	0.4891	0.5691	0.4891	0.2706	
	4		.2421	.4603	.5401	.4603	.2421	
	6		.2133	.4309	.5104	.4309	.2133	
	8		.1842	.4008	.4801	.4008	.1842	
	10		0.1550	0.3703	0.4492	0.3703	0.1550	
	12		.1255	.3394	.4177	.3394	.1255	
	14		.0959	.3081	.3857	.3081	.0959	
	16		.0658	.2764	.3533	.2764	.0658	
	18		0.0363	0.2443	0.3205	0.2443	0.0363	
	20		.0065	.2120	.2872	.2120	.0065	
	22		.0000	.1794	.2536	.1794	.0000	
	24			.1465	.2197	.1465		

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 30 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3475	0.5848	0.7586	0.8222	0.7586	0.5848	0.3475
	22	.3201	.5609	.7372	.8018	.7372	.5609	.3201
	20	.2828	.5364	.7151	.7813	.7151	.5364	.2828
	18	.2639	.5111	.6920	.7581	.6920	.5111	.2639
	16	0.2355	0.4853	0.6680	0.7349	0.6680	0.4853	0.2355
	14	.2070	.4588	.6433	.7079	.6433	.4588	.2070
	12	.1777	.4317	.6178	.6858	.6178	.4317	.1777
	10	.1484	.4042	.5915	.6600	.5915	.4042	.1484
	8	0.1189	0.3762	0.5645	0.6334	0.5645	0.3762	0.1189
	6	.0893	.3476	.5368	.6060	.5368	.3476	.0893
	4	.0596	.3187	.5084	.5779	.5084	.3187	.0596
	2	.0299	.2894	.4795	.5490	.4795	.2894	.0299
	0	0.0000	0.2598	0.4499	0.5195	0.4499	0.2598	0.0000
Minus	2		0.2298	0.4199	0.4894	0.4199	0.2298	
	4		.1995	.3892	.4586	.3892	.1995	
	6		.1690	.3584	.4274	.3584	.1690	
	8		.1383	.3266	.3956	.3266	.1383	
	10		0.1074	0.2947	0.3633	0.2947	0.1074	
	12		.0764	.2625	.3305	.2625	.0764	
	14		.0453	.2299	.2974	.2299	.0453	
	16		.0136	.1970	.2639	.1970	.0136	
	18		0.0000	0.1639	0.2301	0.1639	0.0000	
	20			.1305	.1959	.1305		
	22			.0971	.1616	.0971		
	24			.0635	.1271	.0635		

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 40 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3649	0.5666	0.7142	0.7683	0.7142	0.5666	0.3649
	22	.3361	.5408	.6906	.7454	.6906	.5408	.3361
	20	.3069	.5143	.6662	.7217	.6662	.5143	.3069
	18	.2773	.4873	.6409	.6972	.6409	.4873	.2773
	16	0.2473	0.4595	0.6149	0.6717	0.6149	0.4595	0.2473
	14	.2171	.4313	.5881	.6454	.5881	.4313	.2171
	12	.1866	.4025	.5605	.6184	.5605	.4025	.1866
	10	.1558	.3732	.5323	.5906	.5323	.3732	.1558
	8	0.1248	0.3445	0.5035	0.5621	0.5035	0.3445	0.1248
	6	.0938	.3133	.4740	.5328	.4740	.3133	.0938
	4	.0626	.2828	.4440	.5030	.4440	.2828	.0626
	2	.0314	.2519	.4134	.4725	.4134	.2519	.0314
	0	0.0000	0.2208	0.3823	0.4415	0.3823	0.2208	0.0000
Minus	2		0.1893	0.3508	0.4099	0.3508	0.1893	
	4		.1576	.3188	.3778	.3188	.1576	
	6		.1257	.2868	.3453	.2868	.1257	
	8		.0937	.2537	.3123	.2537	.0937	
	10		0.0616	0.2207	0.2790	0.2207	0.0616	
	12		.0294	.1874	.2453	.1874	.0294	
	14		.0000	.1539	.2113	.1539	.0000	
	16			.1202	.1771	.1202		
	18			0.0864	0.1426	0.0864		
	20			.0524	.1080	.0524		
	22			.0184	.0732	.0184		
	24			.0000	.0384	.0000		

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 50 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3786	0.5455	0.6673	0.7125	0.6673	0.5455	0.3786
	22	.3487	.5181	.6421	.6875	.6421	.5181	.3487
	20	.3184	.4901	.6158	.6618	.6158	.4901	.3184
	18	.2876	.4615	.5887	.6352	.5887	.4615	.2876
	16	0.2566	0.4323	0.5608	0.6079	0.5608	0.4323	0.2566
	14	.2252	.4025	.5323	.5798	.5323	.4025	.2252
	12	.1935	.3723	.5031	.5510	.5031	.3723	.1935
	10	.1616	.3416	.4733	.5215	.4733	.3416	.1616
	8	0.1295	0.3105	0.4429	0.4914	0.4429	0.3105	0.1295
	6	.0973	.2790	.4120	.4607	.4120	.2790	.0973
	4	.0649	.2472	.3807	.4295	.3807	.2472	.0649
	2	.0325	.2151	.3488	.3977	.3488	.2151	.0325
	0	0.0000	0.1827	0.3165	0.3655	0.3165	0.1827	0.0000
Minus	2		0.1501	0.2838	0.3328	0.2838	0.1501	
	4		.1173	.2508	.2996	.2508	.1173	
	6		.0844	.2178	.2661	.2178	.0844	
	8		.0514	.1839	.2324	.1839	.0514	
	10		0.0183	0.1501	0.1983	0.1501	0.0183	
	12		.0000	.1161	.1639	.1161	.0000	
	14			.0819	.1294	.0819		
	16			.0477	.0947	.0477		
	18			0.0134	0.0599	0.0134		
	20			.0000	.0250	.0000		
	22				.0000			
	24							

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 60 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3889	0.5226	0.6207	0.6565	0.6207	0.5226	0.3889
	22	.3582	.4940	.5934	.6298	.5934	.4940	.3852
	20	.3270	.4647	.5655	.6023	.5655	.4647	.3270
	18	.2954	.4349	.5368	.5741	.5368	.4349	.2954
	16	0.2635	0.4044	0.5074	0.5452	0.5074	0.4044	0.2635
	14	.2313	.3735	.4775	.5156	.4775	.3735	.2313
	12	.1988	.3421	.4470	.4853	.4470	.3421	.1988
	10	.1660	.3103	.4159	.4545	.4159	.3103	.1660
	8	0.1330	0.2781	0.3843	0.4232	0.3843	0.2781	0.1330
	6	.1000	.2456	.3523	.3913	.3523	.2456	.1000
	4	.0667	.2128	.3198	.3589	.3198	.2128	.0667
	2	.0334	.1798	.2869	.3262	.2869	.1798	.0334
	0	0.0000	0.1465	0.2537	0.2930	0.2537	0.1465	0.0000
Minus	2		0.1131	0.2202	0.2595	0.2202	0.1131	
	4		.0794	.1864	.2255	.1864	.0794	
	6		.0457	.1528	.1914	.1528	.0457	
	8		.0120	.1182	.1571	.1182	.0120	
	10		0.0000	0.0840	0.1225	0.0840	0.0000	
	12			.0494	.0878	.0494		
	14			.0149	.0529	.0149		
	16			.0000	.0181	.0000		
	18				0.0000			
	20							
	22							
	24							

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 70 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3963	0.4990	0.5744	0.6019	0.5744	0.4990	0.3963
	22	.3650	.4694	.5457	.5737	.5457	.4694	.3650
	20	.3333	.4390	.5164	.5447	.5164	.4390	.3333
	18	.3011	.4082	.4865	.5152	.4865	.4082	.3011
	16	0.2686	0.3768	0.4559	0.4849	0.4559	0.3768	0.2686
	14	.2357	.3449	.4249	.4541	.4249	.3449	.2357
	12	.2026	.3127	.3933	.4227	.3933	.3127	.2026
	10	.1692	.2801	.3612	.3909	.3612	.2801	.1692
	8	0.1355	0.2470	0.3286	0.3585	0.3286	0.2470	0.1355
	6	.1019	.2137	.2957	.3257	.2957	.2137	.1019
	4	.0680	.1803	.2624	.2925	.2624	.1803	.0680
	2	.0341	.1465	.2288	.2590	.2288	.1465	.0341
	0	0.0000	0.1125	0.1949	0.2251	0.1949	0.1125	0.0000
Minus	2		0.0785	0.1608	0.1910	0.1608	0.0785	
	4		.0443	.1265	.1565	.1265	.0443	
	6		.0101	.0925	.1220	.0925	.0101	
	8		.0000	.0575	.0873	.0575	.0000	
	10			0.0228	0.0525	0.0228		
	12			.0000	.0176	.0000		
	14				.0000			
	16							
	18							
	20							
	22							
	24							

Table 7.--Sin θ latitude 42°--continued

Latitude: 42°
Slope: 80 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4013	0.4754	0.5297	0.5496	0.5297	0.4754	0.4013
	22	.3696	.4449	.5000	.5201	.5000	.4449	.3696
	20	.3375	.4138	.4696	.4900	.4696	.4138	.3375
	18	.3049	.3822	.4386	.4593	.4386	.3822	.3049
	16	0.2720	0.3500	0.4071	0.4280	0.4071	0.3500	0.2720
	14	.2387	.3175	.3751	.3962	.3751	.3175	.2387
	12	.2052	.2845	.3427	.3639	.3427	.2845	.2052
	10	.1714	.2513	.3098	.3312	.3098	.2513	.1714
	8	0.1373	0.2177	0.2765	0.2981	0.2765	0.2177	0.1373
	6	.1032	.1838	.2429	.2645	.2429	.1838	.1032
	4	.0689	.1498	.2091	.2307	.2091	.1498	.0689
	2	.0345	.1155	.1749	.1966	.1749	.1155	.0345
	0	0.0000	0.0812	0.1405	0.1623	0.1405	0.0812	0.0000
Minus	2		0.0467	0.1060	0.1278	0.1060	0.0467	
	4		.0121	.0714	.0930	.0714	.0121	
	6		.0000	.0372	.0583	.0372	.0000	
	8			.0019	.0234	.0019		
	10			0.0000	0.0085	0.0000		
	12				.0000			
	14							
	16							
	18							
	20							
	22							
	24							

Table 7.--Sin θ, latitude 42° --continued

Latitude: 42°
Slope: 90 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4045	0.4522	0.4874	0.5003	0.4874	0.4522	0.4045
	22	.3725	.4211	.4567	.4697	.4567	.4211	.3725
	20	.3401	.3894	.4254	.4385	.4254	.3894	.3401
	18	.3073	.3572	.3936	.4071	.3936	.3572	.3073
	16	0.2741	0.3245	0.3613	0.3749	0.3613	0.3245	0.2741
	14	.2406	.2915	.3286	.3423	.3286	.2915	.2406
	12	.2068	.2580	.2955	.3093	.2955	.2580	.2068
	10	.1727	.2243	.2620	.2760	.2620	.2243	.1727
	8	0.1383	0.1903	0.2282	0.2421	0.2282	0.1903	0.1383
	6	.1040	.1560	.1942	.2081	.1942	.1560	.1040
	4	.0694	.1216	.1599	.1740	.1599	.1216	.0694
	2	.0348	.0871	.1254	.1396	.1254	.0871	.0348
	0	0.0000	0.0524	0.0907	0.1049	0.0907	0.0524	0.0000
Minus	2		0.0177	0.0560	0.0702	0.0560	0.0177	
	4		.0000	.0211	.0353	.0211	.0000	
	6			.0000	.0004	.0000		
	8				.0000			
	10							
	12							
	14							
	16							
	18							
	20							
	22							
	24							

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 100 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4062	0.4300	0.4478	0.4550	0.4478	0.4300	0.4062
	22	.3741	.3984	.4161	.4226	.4161	.3984	.3741
	20	.3416	.3662	.3842	.3907	.3842	.3662	.3416
	18	.3086	.3336	.3517	.3584	.3517	.3336	.3086
	16	0.2753	0.3005	0.3188	0.3256	0.3188	0.3005	0.2753
	14	.2416	.2670	.2856	.2924	.2856	.2670	.2416
	12	.2076	.2332	.2520	.2588	.2520	.2332	.2076
	10	.1734	.1992	.2181	.2249	.2181	.1992	.1734
	8	0.1389	0.1649	0.1839	0.1908	0.1839	0.1649	0.1389
	6	.1044	.1304	.1495	.1564	.1495	.1304	.1044
	4	.0697	.0958	.1149	.1219	.1149	.0958	.0697
	2	.0349	.0610	.0801	.0872	.0801	.0610	.0349
	0	0.0000	0.0262	0.0453	0.0523	0.0453	0.0262	0.0000
Minus	2		0.0000	0.0105	0.0175	0.0105	0.0000	
	4			.0000	.0000	.0000		
	6							
	8							
	10							
	12							
	14							
	16							
	18							
	20							
	22							
	24							

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 10 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3563	0.6640	0.8720	0.9246	0.8077	0.5527	0.2278
22	.3342	.6465	.8576	.9109	.7923	.5335	.2038
20	.3130	.6282	.8421	.8962	.7760	.5137	.1818
18	.2888	.6091	.8256	.8804	.7587	.4932	.1550
16	0.2656	0.5893	0.8081	0.8635	0.7405	0.4721	0.1303
14	.2420	.5688	.7897	.8455	.7214	.4505	.1055
12	.2181	.5475	.7702	.8265	.7014	.4283	.0805
10	.1940	.5256	.7499	.8066	.6806	.4056	.0554
8	0.1696	0.5031	0.7286	0.7856	0.6589	0.3824	0.0303
6	.1450	.4799	.6985	.7636	.6364	.3587	.0051
4	.1203	.4562	.6833	.7408	.6131	.3347	.0000
2	.0955	.4319	.6595	.7170	.5927	.3101	
0	0.0704	0.4071	0.6348	0.6924	0.5644	0.2853	
Minus 2	0.0453	0.3818	0.6094	0.6669	0.5390	0.2600	
4	.0201	.3560	.5831	.6406	.5130	.2345	
6	.0000	.3298	.5563	.6135	.4863	.2086	
8		.3032	.5287	.5857	.4590	.1825	
10		0.2763	0.5005	0.5572	0.4312	0.1532	
12		.2489	.4716	.5279	.4028	.1297	
14		.2213	.4422	.4981	.3740	.1031	
16		.1933	.4123	.4676	.3446	.0761	
18		0.1653	0.3818	0.4366	0.3149	0.0494	
20		.1369	.3509	.4050	.2848	.0124	
22		.1085	.3196	.3629	.2543	.0000	
24		.0799	.2878	.3405	.2236		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 20 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4355	0.7089	0.8753	0.8897	0.7486	0.4895	0.1821
22	.4130	.6906	.8593	.8740	.7307	.4678	.1558
20	.3900	.6713	.8423	.8572	.7120	.4456	.1293
18	.3665	.6512	.8243	.8394	.6924	.4228	.1027
16	0.3426	0.6304	0.8053	0.8205	0.6720	0.3995	0.0760
14	.3182	.6087	.7853	.8007	.6508	.3757	.0491
12	.2935	.5863	.7644	.7799	.6287	.3514	.0222
10	.2684	.5632	.7425	.7581	.6059	.3267	.0000
8	0.2430	0.5395	0.7197	0.7354	0.5823	0.3016	
6	.2173	.5150	.6946	.7118	.5581	.2761	
4	.1913	.4899	.6715	.6873	.5332	.2503	
2	.1653	.4643	.6462	.6680	.5076	.2242	
0	0.1387	0.4381	0.6201	0.6359	0.4804	0.1979	
Minus 2	0.1121	0.4113	0.5932	0.6091	0.4546	0.1713	
4	.0854	.3840	.5656	.5814	.4272	.1444	
6	.0585	.3563	.5374	.5531	.3995	.1174	
8	.0317	.3281	.5084	.5241	.3711	.0903	
10	0.0047	0.2996	0.4788	0.4944	0.3423	0.0630	
12	.0000	.2706	.4487	.4642	.3130	.0357	
14		.2414	.4180	.4333	.2834	.0083	
16		.2116	.3868	.4020	.2535	.0000	
18		0.1820	0.3551	0.3702	0.2232		
20		.1520	.3230	.3379	.1927		
22		.1218	.2905	.3052	.1619		
24		.0914	.2577	.2722	.1310		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 30 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5077	0.7459	0.8705	0.8482	0.6849	0.4264	0.1365
22	.4850	.7268	.8532	.8305	.6648	.4005	.1083
20	.4524	.7068	.8349	.8120	.6440	.3761	.0705
18	.4379	.6859	.8156	.7924	.6224	.3512	.0514
16	0.4136	0.6642	0.7953	0.7718	0.6000	0.3259	0.0230
14	.3902	.6417	.7741	.7483	.5769	.3002	.0000
12	.3634	.6184	.7518	.7279	.5531	.2742	
10	.3376	.5944	.7287	.7046	.5286	.2478	
8	0.3114	0.5696	0.7047	0.6805	0.5035	0.2211	
6	.2849	.5441	.6777	.6554	.4777	.1941	
4	.2579	.5180	.6541	.6297	.4511	.1669	
2	.2309	.4912	.6276	.6031	.4245	.1395	
0	0.2032	0.4639	0.6005	0.5758	0.3973	0.1120	
Minus 2	0.1756	0.4360	0.5723	0.5479	0.3692	0.0843	
4	.1474	.4071	.5436	.5193	.3409	.0564	
6	.1193	.3786	.5144	.4889	.3123	.0286	
8	.0910	.3492	.4843	.4600	.2830	.0007	
10	0.0626	0.3194	0.4537	0.4296	0.2536		
12	.0341	.2891	.4225	.3986	.2238		
14	.0056	.2585	.3909	.3671	.1937		
16	.0000	.2273	.3587	.3353	.1634		
18		0.1965	0.3262	0.3030	0.1330		
20		.1651	.2932	.2703	.1023		
22		.1335	.2599	.2373	.0715		
24		.1017	.2263	.2040	.0407		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 40 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0800	0800	1000	1200	1400	1600	1800
Plus 24	0.5720	0.7747	0.8589	0.8019	0.6190	0.3592	0.0922
22	.5493	.7551	.8405	.7827	.5971	.3334	.0623
20	.5260	.7346	.8211	.7625	.5744	.3072	.0325
18	.5020	.7132	.8008	.7414	.5510	.2806	.0025
16	0.4775	0.6909	0.7794	0.7194	0.5269	0.2536	0.0000
14	.4523	.6677	.7571	.6965	.5023	.2263	
12	.4266	.6437	.7338	.6728	.4770	.1988	
10	.4004	.6190	.7097	.6482	.4511	.1710	
8	0.3737	0.5943	0.6847	0.6229	0.4246	0.1467	
6	.3465	.5672	.6562	.5968	.3977	.1149	
4	.3189	.5403	.6322	.5700	.3703	.0866	
2	.2912	.5128	.6048	.5425	.3424	.0582	
0	0.2626	0.4846	0.5767	0.5143	0.3141	0.0297	
Minus 2	0.2342	0.4558	0.5479	0.4855	0.2854	0.0012	
4	.2050	.4264	.5183	.4561	.2563	.0000	
6	.1758	.3966	.4884	.4261	.2272		
8	.1465	.3662	.4575	.3957	.1974		
10	0.1171	0.3355	0.4262	0.3647	0.1675		
12	.0871	.3042	.3943	.3333	.1375		
14	.0573	.2727	.3620	.3015	.1072		
16	.0274	.2403	.3293	.2693	.0769		
18	0.0000	0.2086	0.2962	0.2368	0.0464		
20		.1761	.2627	.2040	.0159		
22		.1434	.2289	.1710	.0000		
24		.1106	.1948	.1377			
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 50 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6279	0.7961	0.8419	0.7529	0.5531	0.2957	0.0501
22	.6054	.7762	.8227	.7323	.5295	.2684	.0190
20	.5822	.7553	.8024	.7108	.5052	.2406	.0000
18	.5583	.7335	.7811	.6885	.4804	.2126	
16	0.5337	0.7108	0.7589	0.6653	0.4549	0.1843	
14	.5085	.6872	.7358	.6413	.4290	.1557	
12	.4826	.6628	.7118	.6165	.4025	.1270	
10	.4561	.6375	.6869	.5909	.3755	.0982	
8	0.4291	0.6115	0.6611	0.5647	0.3480	0.0691	
6	.4016	.5848	.6315	.5377	.3201	.0400	
4	.3736	.5573	.6073	.5101	.2918	.0109	
2	.3455	.5292	.5793	.4819	.2632	.0000	
0	0.3162	0.5004	0.5505	0.4531	0.2343	0.0000	
Minus 2	0.2872	0.4710	0.5211	0.4237	0.2051		
4	.2573	.4411	.4910	.3938	.1756		
6	.2273	.4105	.4606	.3635	.1461		
8	.1972	.3795	.4292	.3327	.1160		
10	0.1667	0.3481	0.3974	0.3015	0.0860		
12	.1360	.3162	.3634	.2699	.0559		
14	.1052	.2839	.3325	.2380	.0257		
16	.0742	.2507	.2994	.2058	.0000		
18	0.0432	0.2184	0.2660	0.1734			
20	.0121	.1851	.2322	.1407			
22	.0000	.1517	.1982	.1079			
24		.1181	.1639	.0749			
Declination of sun (degrees)	0600	0800	1000	1200	1400	1600	1800
	Solar time (northwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 60 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6757	0.8110	0.8211	0.7031	0.4887	0.2353	0.0110
22	.6535	.7909	.8011	.6813	.4638	.2067	.0000
20	.6306	.7698	.7801	.6588	.4383	.1777	
18	.6068	.7478	.7582	.6354	.4122	.1485	
16	0.5824	0.7248	0.7354	0.6112	0.3857	0.1191	
14	.5572	.7010	.7117	.5863	.3587	.0896	
12	.5314	.6763	.6870	.5607	.3312	.0599	
10	.5049	.6508	.6616	.5344	.3033	.0302	
8	0.4777	0.6245	0.6353	0.5075	0.2751	0.0005	
6	.4501	.5974	.6047	.4799	.2465	.0000	
4	.4218	.5696	.5805	.4517	.2176		
2	.3935	.5411	.5521	.4230	.1885		
0	0.3638	0.5120	0.5229	0.3938	0.1591		
Minus 2	0.3344	0.4822	0.4932	0.3641	0.1296		
4	.3040	.4518	.4628	.3339	.0999		
6	.2735	.4209	.4322	.3034	.0703		
8	.2428	.3895	.4004	.2725	.0401		
10	0.2117	0.3576	0.3684	0.2413	0.0102		
12	.1803	.3253	.3360	.2097	.0000		
14	.1488	.2925	.3032	.1779			
16	.1170	.2588	.2700	.1459			
18	0.0852	0.2261	0.2365	0.1137			
20	.0531	.1924	.2027	.0813			
22	.0211	.1585	.1687	.0489			
24	.0000	.1244	.1344	.0164			
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 70 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7160	0.8202	0.7977	0.6538	0.4273	0.1788	0.0000
22	.6942	.8003	.7772	.6311	.4012	.1491	
20	.6716	.7791	.7557	.6077	.3747	.1191	
18	.6482	.7570	.7333	.5835	.3477	.0891	
16	0.6239	0.7340	0.7100	0.5586	0.3202	0.0588	
14	.5990	.7100	.6858	.5330	.2924	.0285	
12	.5733	.6852	.6608	.5067	.2642	.0000	
10	.5469	.6595	.6350	.4799	.2357		
8	0.5197	0.6331	0.6084	0.4524	0.2069		
6	.4921	.6058	.5771	.4244	.1778		
4	.4638	.5776	.5531	.3959	.1486		
2	.4354	.5492	.5244	.3669	.1191		
0	0.4055	0.5199	0.4950	0.3375	0.0895		
Minus 2	0.3760	0.4900	0.4651	0.3076	0.0598		
4	.3452	.4594	.4345	.2774	.0300		
6	.3145	.4283	.4039	.2468	.0006		
8	.2834	.3966	.3720	.2160	.0000		
10	0.2518	0.3638	0.3400	0.1848			
12	.2200	.3319	.3076	.1535			
14	.1879	.2995	.2748	.1219			
16	.1556	.2649	.2417	.0903			
18	0.1232	0.2320	0.2083	0.0585			
20	.0905	.1980	.1746	.0266			
22	.0577	.1638	.1407	.0000			
24	.0249	.1295	.1067				
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 7.--Sin θ, latitude 42° - continued

Latitude: 42°
Slope: 80 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7496	0.8255	0.7731	0.6061	0.3695	0.1265	0.0000
22	.7283	.8054	.7521	.5827	.3425	.0960	
20	.7061	.7843	.7303	.5585	.3152	.0653	
18	.6830	.7622	.7075	.5337	.2874	.0345	
16	0.6591	0.7391	0.6839	0.5082	0.2592	0.0037	
14	.6344	.7152	.6594	.4821	.2308	.0000	
12	.6090	.6903	.6341	.4554	.2021		
10	.5827	.6647	.6081	.4281	.1731		
8	0.5558	0.6382	0.5813	0.4004	0.1439		
6	.5283	.6109	.5494	.3775	.1145		
4	.5000	.5830	.5257	.3434	.0850		
2	.4717	.5543	.4989	.3143	.0554		
0	0.4417	0.5249	0.4674	0.2847	0.0257		
Minus 2	0.4121	0.4949	0.4375	0.2549	0.0000		
4	.3813	.4643	.4070	.2247			
6	.3503	.4331	.3763	.1942			
8	.3191	.4014	.3445	.1636			
10	0.2873	0.3692	0.3126	0.1327			
12	.2552	.3366	.2803	.1016			
14	.2228	.3035	.2477	.0704			
16	.1901	.2693	.2148	.0392			
18	0.1572	0.2363	0.1817	0.0079			
20	.1241	.2023	.1483	.0000			
22	.0909	.1680	.1147				
24	.0575	.1335	.0810				
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 90 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7774	0.8272	0.7479	0.5608	0.3158	0.0787	0.0000
22	.7566	.8072	.7267	.5367	.2881	.0475	
20	.7348	.7861	.7045	.5119	.2600	.0162	
18	.7122	.7637	.6815	.4867	.2317	.0000	
16	0.6887	0.7412	0.6577	0.4608	0.2030		
14	.6643	.7173	.6331	.4343	.1741		
12	.6392	.6925	.6076	.4073	.1449		
10	.6133	.6670	.5815	.3798	.1156		
8	0.5865	0.6406	0.5546	0.3517	0.0862		
6	.5592	.6134	.5224	.3233	.0566		
4	.5311	.5855	.4989	.2946	.0270		
2	.5029	.5569	.4701	.2655	.0000		
0	0.4730	0.5276	0.4408	0.2360			
Minus 2	0.4435	0.4976	0.4109	0.2062			
4	.4126	.4671	.3805	.1762			
6	.3817	.4359	.3500	.1460			
8	.3503	.4043	.3184	.1156			
10	0.3184	0.3722	0.2867	0.0850			
12	.2862	.3396	.2546	.0544			
14	.2536	.3065	.2223	.0236			
16	.2207	.2723	.1897	.0000			
18	0.1876	0.2395	0.1569				
20	.1541	.2054	.1239				
22	.1206	.1712	.0907				
24	.0869	.1367	.0574				
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 100 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.8003	0.8263	0.7230	0.5180	0.2662	0.0351	0.0000
22	.7800	.8065	.7015	.4934	.2379	.0035	
20	.7587	.7855	.6792	.4683	.2094	.0000	
18	.7366	.7637	.6561	.4426	.1805		
16	0.7135	0.7409	0.6321	0.4164	0.1515		
14	.6895	.7172	.6074	.3896	.1222		
12	.6647	.6926	.5819	.3624	.0874		
10	.6391	.6672	.5557	.3347	.0633		
8	0.6127	0.6409	0.5289	0.3066	0.0337		
6	.5856	.6139	.4964	.2781	.0041		
4	.5577	.5861	.4733	.2494	.0000		
2	.5297	.5576	.4446	.2203			
0	0.5000	0.5285	0.4153	0.1909			
Minus 2	0.4707	0.4987	0.3856	0.1613			
4	.4398	.4683	.3554	.1315			
6	.4089	.4373	.3252	.1016			
8	.3776	.4058	.2938	.0715			
10	0.3457	0.3738	0.2624	0.0413			
12	.3135	.3413	.2306	.0111			
14	.2808	.3084	.1987	.0000			
16	.2478	.2742	.1664				
18	0.2145	0.2416	0.1340				
20	.1809	.2077	.1014				
22	.1472	.1736	.0687				
24	.1132	.1392	.0359				
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 10 percent

Exp: East
Exp: West

Declination of sun (degrees)		Solar time (east exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3617	0.6873	0.9013	0.9463	0.8104	0.5299	0.1799
	22	.3417	.6721	.8893	.9350	.7971	.5123	.1572
	20	.3205	.6561	.8763	.9226	.7827	.4942	.1349
	18	.3004	.6393	.8621	.9090	.7675	.4754	.1111
	16	0.2792	0.6218	0.8469	0.8943	0.7513	0.4561	0.0879
	14	.2576	.6034	.8207	.8786	.7342	.4362	.0645
	12	.2358	.5844	.8135	.8617	.7162	.4158	.0411
	10	.2136	.5646	.7953	.8438	.6973	.3949	.0176
	8	0.1912	0.5441	0.7761	0.8249	0.6775	0.3735	0.0000
	6	.1685	.5230	.7559	.8050	.6570	.3516	
	4	.1457	.5012	.7349	.7841	.6356	.3293	
	2	.1227	.4789	.7129	.7623	.6135	.3066	
	0	0.0995	0.4559	0.6901	0.7395	0.5906	0.2836	
Minus	2	0.0762	0.4324	0.6665	0.7158	0.5671	0.2601	
	4	.0528	.4083	.6420	.6912	.5427	.2364	
	6	.0294	.3838	.6168	.6658	.5178	.2124	
	8	.0000	.3588	.5908	.6396	.4922	.1881	
	10		0.3334	0.5641	0.6126	0.4661	0.1636	
	12		.3075	.5366	.5849	.4393	.1389	
	14		.2813	.5086	.5564	.4120	.1141	
	16		.2547	.4799	.5273	.3842	.0891	
	18		0.2278	0.4506	0.4975	0.3560	0.0639	
	20		.2007	.4208	.4671	.3273	.0387	
	22		.1733	.3905	.4362	.2982	.0135	
	24		.1457	.3597	.4047	.2688	.0000	

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 20 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4460	0.7549	0.9330	0.9326	0.7538	0.4446	0.0877
22	.4265	.7411	.9218	.9214	.7400	.4261	.0639
20	.4087	.7264	.9096	.9092	.7253	.4072	.0401
18	.3893	.7108	.8962	.8958	.7097	.3879	.0162
16	0.3694	0.6944	0.8817	0.8813	0.6932	0.3678	0.0000
14	.3490	.6771	.8662	.8658	.6759	.3475	
12	.3283	.6589	.8496	.8492	.6578	.3267	
10	.3071	.6400	.8321	.8316	.6389	.3055	
8	0.2855	0.6203	0.8134	0.8129	0.6191	0.2839	
6	.2636	.5999	.7937	.7933	.5987	.2620	
4	.2414	.5787	.7731	.7727	.5775	.2398	
2	.2189	.5568	.7516	.7512	.5556	.2173	
0	0.1961	0.5342	0.7291	0.7287	0.5330	0.1945	
Minus 2	0.1731	0.5110	0.7058	0.7054	0.5098	0.1715	
4	.1499	.4871	.6816	.6811	.4859	.1483	
6	.1265	.4627	.6566	.6561	.4615	.1249	
8	.1029	.4377	.6307	.6303	.4365	.1013	
10	0.0792	0.4121	0.6041	0.6037	0.4110	0.0776	
12	.0554	.3861	.5768	.5764	.3850	.0538	
14	.0316	.3596	.5487	.4583	.3585	.0300	
16	.0077	.3327	.5200	.5196	.3315	.0061	
18	0.0000	0.3053	0.4907	0.4903	0.3042	0.0000	
20		.2776	.4608	.4603	.2764		
22		.2495	.4303	.4299	.2484		
24		.2211	.3992	.3988	.2201		

Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 30 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5232	0.8132	0.9551	0.9110	0.6926	0.3585	0.0000
22	.5065	.8008	.9449	.9001	.6784	.3393	
20	.4798	.7875	.9335	.8881	.6635	.3198	
18	.4712	.7732	.9210	.8750	.6477	.2999	
16	0.4529	0.7580	.9073	0.8609	0.6311	0.2796	
14	.4346	.7418	.8926	.8457	.6138	.2589	
12	.4143	.7248	.8768	.8295	.5958	.2380	
10	.3943	.7069	.8599	.8123	.5769	.2167	
8	0.3738	0.6881	0.8419	0.7941	0.5574	0.1952	
6	.3528	.6684	.8229	.7749	.5372	.1735	
4	.3314	.6480	.8030	.7548	.5163	.1515	
2	.3045	.6268	.7820	.7337	.4948	.1293	
0	0.2873	0.6047	0.7603	0.7118	0.4730	0.1071	
Minus 2	0.2598	0.5820	0.7373	0.6890	0.4501	0.0846	
4	.2419	.5586	.7135	.6653	.4269	.0621	
6	.2188	.5345	.6890	.6409	.4032	.0395	
8	.1954	.5067	.6635	.6157	.3790	.0168	
10	0.1717	0.4844	0.6373	0.5897	0.3543	0.0000	
12	.1478	.4583	.6103	.5630	.3292		
14	.1238	.4317	.5825	.5356	.3037		
16	.0996	.4047	.5477	.5076	.2778		
18	0.0752	0.3771	0.5249	0.4789	0.2516		
20	.0700	.3491	.4951	.4497	.2251		
22	.0263	.3206	.4647	.4199	.1983		
24	.0018	.2918	.4337	.3896	.1712		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 40 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5920	0.8617	0.9682	0.8830	0.6289	0.2740	0.0000
22	.5771	.8488	.9589	.8725	.6146	.2544	
20	.5615	.8389	.9485	.8609	.5995	.2344	
18	.5452	.8260	.9369	.8482	.5837	.2142	
16	0.5283	0.8121	0.9241	0.8345	0.5671	0.1937	
14	.5107	.7971	.9103	.8198	.5499	.1730	
12	.4924	.7812	.8953	.8041	.5320	.1520	
10	.4736	.7644	.8792	.7874	.5135	.1309	
8	0.4542	0.7426	0.8621	0.7697	0.4943	0.1136	
6	.4343	.7279	.8439	.7511	.4745	.0882	
4	.4138	.7083	.8247	.7316	.4542	.0666	
2	.3928	.6879	.8045	.7113	.4333	.0450	
0	0.3714	0.6666	0.7832	0.6900	0.4119	0.0234	
Minus 2	0.3495	0.6445	0.7611	0.6679	0.3899	0.0017	
4	.3271	.6217	.7380	.6450	.3675	.0000	
6	.3044	.5980	.7140	.6213	.3447		
8	.2813	.5737	.6892	.5968	.3214		
10	0.2579	0.5486	0.6635	0.5716	0.2977		
12	.2341	.5229	.6370	.5457	.2737		
14	.2101	.4965	.6097	.5192	.2493		
16	.1857	.4696	.5817	.4920	.2247		
18	0.1612	0.4420	0.5529	0.4643	0.1997		
20	.1365	.4139	.5235	.4359	.1745		
22	.1116	.3853	.4935	.4070	.1491		
24	.0866	.3563	.4628	.3777	.1236		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 50 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6520	0.9009	0.9736	0.8507	0.5650	0.1932	0.0000
22	.6388	.8914	.9652	.8405	.5506	.1732	
20	.6249	.8809	.9557	.8293	.5355	.1531	
18	.6103	.8694	.9451	.8171	.5197	.1327	
16	0.5949	0.8567	0.9333	0.8039	0.5034	0.1121	
14	.5787	.8431	.9203	.7897	.4864	.0915	
12	.5619	.8283	.9062	.7746	.4688	.0707	
10	.5443	.8126	.8910	.7585	.4506	.0498	
8	0.5261	0.7959	0.8748	0.7415	0.4319	0.0289	
6	.5073	.7782	.8574	.7236	.4127	.0079	
4	.4879	.7596	.8390	.7048	.3929	.0000	
2	.4678	.7401	.8196	.6852	.3727		
0	0.4472	0.7196	0.7992	0.6647	0.3520		
Minus 2	0.4261	0.6983	0.7779	0.6434	0.3309		
4	.4044	.6761	.7555	.6213	.3094		
6	.3822	.6531	.7323	.5985	.2875		
8	.3596	.6293	.7082	.5749	.2653		
10	0.3365	0.6048	0.6832	0.5507	0.2428		
12	.3130	.5795	.6573	.5257	.2199		
14	.2891	.5535	.6307	.5001	.1968		
16	.2649	.5268	.6033	.4740	.1734		
18	0.2504	0.4995	0.5752	0.4472	0.1499		
20	.2155	.4715	.5463	.4199	.1261		
22	.1904	.4430	.5169	.3921	.1022		
24	.1651	.4140	.4867	.3638	.0782		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 60 percent

Exp: East
Exp: West

Declination of sun (degrees)		Solar time (east exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.7034	0.9315	0.9725	0.8155	0.5025	0.1174	0.0000
	22	.6920	.9235	.9651	.8058	.4881	.0972	
	20	.6797	.9143	.9566	.7951	.4731	.0770	
	18	.6666	.9041	.9468	.7834	.4575	.0566	
	16	0.6527	0.8927	0.9359	0.7707	0.4414	0.0361	
	14	.6380	.8803	.9239	.7571	.4247	.0156	
	12	.6225	.8668	.9107	.7426	.4075	.0000	
	10	.6063	.8522	.8965	.7272	.3898		
	8	0.5893	0.8366	0.8811	0.7109	0.3716		
	6	.5717	.8199	.8646	.6937	.3530		
	4	.5533	.8023	.8471	.6757	.3339		
	2	.5342	.7837	.8286	.5669	.3208		
	0	0.5145	0.7642	0.8091	0.6372	0.2946		
Minus	2	0.4941	0.7437	0.7886	0.6168	0.2744		
	4	.4723	.7223	.7671	.5957	.2539		
	6	.4517	.7000	.7447	.5737	.2330		
	8	.4296	.6769	.7214	.5512	.2119		
	10	0.4071	0.6529	0.6972	0.5279	0.1905		
	12	.3840	.6282	.6721	.5040	.1689		
	14	.3604	.6027	.6463	.4795	.1471		
	16	.3364	.5764	.6196	.4544	.1251		
	18	0.3120	0.5495	0.5922	0.4287	0.1029		
	20	.2872	.5219	.5641	.4026	.0860		
	22	.2621	.4936	.5353	.3759	.0582		
	24	.2366	.4647	.5058	.3488	.0358		
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (west exposure)						

Table 7.--Sin θ latitude 42°--continued

Latitude: 42°
Slope: 70 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7468	0.9547	0.9666	0.7791	0.4427	0.0474	0.0000
22	.7371	.9481	.9601	.7698	.4283	.0271	
20	.7264	.9402	.9524	.7596	.4135	.0069	
18	.7148	.9312	.9435	.7484	.3981	.0000	
16	0.7023	0.9211	0.9335	0.7363	0.3823		
14	.6891	.9099	.9224	.7233	.3660		
12	.6749	.8975	.9102	.7095	.3492		
10	.6599	.8841	.8968	.6947	.3320		
8	0.6442	0.8695	0.8823	0.6792	0.3145		
6	.6276	.8539	.8668	.6628	.2965		
4	.6103	.8373	.8502	.6455	.2782		
2	.5923	.8197	.8326	.6276	.2595		
0	0.5735	0.8010	0.8140	0.6088	0.2405		
Minus 2	0.5540	0.7814	0.7943	0.5893	0.2212		
4	.5338	.7608	.7737	.5691	.2017		
6	.5130	.7393	.7522	.5482	.1819		
8	.4916	.7170	.7298	.5266	.1619		
10	0.4696	0.6916	0.7064	0.5044	0.1417		
12	.4470	.6696	.6822	.4815	.1213		
14	.4238	.6446	.6572	.4581	.1008		
16	.4001	.6189	.6313	.4341	.0801		
18	0.3760	0.5924	0.6047	0.4096	0.0593		
20	.3514	.5652	.5774	.3846	.0386		
22	.3263	.5373	.5493	.3591	.0177		
24	.3009	.5088	.5206	.3332	.0000		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 80 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7832	0.9718	0.9570	0.7427	0.3863	0.0000	0.0000
22	.7749	.9664	.9513	.7338	.3721		
20	.7657	.9597	.9445	.7240	.3575		
18	.7556	.9519	.9365	.7134	.3424		
16	0.7445	0.9430	0.9274	0.7018	0.3269		
14	.7325	.9329	.9171	.6895	.3110		
12	.7197	.9216	.9057	.6763	.2947		
10	.7059	.9093	.8933	.6622	.2781		
8	0.6913	0.8958	0.8797	0.6474	0.2611		
6	.6759	.8812	.8650	.6317	.2438		
4	.6596	.8656	.8494	.6153	.2262		
2	.6425	.8489	.8326	.5982	.2083		
0	0.6247	0.8311	0.8149	0.5803	0.1902		
Minus 2	0.6061	0.8124	0.7962	0.5617	0.1719		
4	.5867	.7927	.7765	.5424	.1533		
6	.5667	.7720	.7558	.5225	.1345		
8	.5459	.7503	.7343	.5019	.1156		
10	0.5245	0.7278	0.7118	0.4808	0.0966		
12	.5024	.7044	.6885	.4590	.0774		
14	.4797	.6801	.6643	.4367	.0581		
16	.4565	.6549	.6393	.4138	.0388		
18	0.4327	0.6290	0.6136	0.3904	0.0194		
20	.4083	.6023	.5871	.3666	.0000		
22	.3835	.5749	.5598	.3423			
24	.3582	.5468	.5319	.3176			
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 90 percent

Exp: East
Exp: West

Declination of sun (degrees)		Solar time (east exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.8134	0.9839	0.9449	0.7069	0.3337	0.0000	0.0000
	22	.8065	.9795	.9400	.6985	.3197		
	20	.7987	.9740	.9339	.6892	.3052		
	18	.7899	.8673	.9268	.6790	.2905		
	16	0.7801	0.9595	0.9185	0.6681	0.2754		
	14	.7694	.9504	.9090	.6563	.2600		
	12	.7577	.9402	.8985	.6437	.2441		
	10	.7451	.9289	.8869	.6303	.2281		
	8	0.7317	0.9164	0.8742	0.6162	0.2117		
	6	.7173	.9028	.8604	.6013	.1951		
	4	.7020	.8881	.8456	.5857	.1782		
	2	.6859	.8724	.8297	.5694	.1611		
	0	0.6690	0.8555	0.8128	0.5524	0.1439		
Minus	2	0.6512	0.8376	0.7950	0.5347	0.1264		
	4	.6326	.8187	.7762	.5163	.1088		
	6	.6133	.7988	.7564	.4973	.0911		
	8	.5932	.7780	.7357	.4778	.0733		
	10	0.5724	0.7562	0.7141	0.4576	0.0553		
	12	.5509	.7334	.6917	.4369	.0373		
	14	.5288	.7098	.6684	.4156	.0193		
	16	.5059	.6853	.6443	.3939	.0012		
	18	0.4825	0.6600	0.6194	0.3717	0.0000		
	20	.4585	.6338	.5937	.3489			
	22	.4339	.6069	.5673	.3258			
	24	.4088	.5793	.5403	.3023			
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (west exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 100 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.8384	0.9919	0.9312	0.6725	0.2852	0.0000	0.0000
22	.8329	.9886	.9270	.6645	.2714		
20	.8263	.9842	.9217	.6556	.2572		
18	.8187	.9785	.9153	.6460	.2428		
16	0.8101	0.9716	0.9077	0.6355	0.2280		
14	.8006	.9636	.8991	.6243	.2130		
12	.7900	.9544	.8893	.6124	.1977		
10	.7785	.9440	.8785	.5997	.1821		
8	0.7661	0.9324	0.8666	0.5862	0.1664		
6	.7527	.9198	.8537	.5721	.1504		
4	.7384	.9060	.8397	.5572	.1343		
2	.7232	.8911	.8247	.5417	.1180		
0	0.7071	0.8751	0.8086	0.5255	0.1015		
Minus 2	0.6902	0.8581	0.7916	0.5087	0.0850		
4	.6724	.8400	.7737	.4912	.0683		
6	.6538	.8209	.7547	.4731	.0515		
8	.6344	.8008	.7349	.4545	.0347		
10	0.6142	0.7797	0.7142	0.4353	0.0178		
12	.5933	.7576	.6926	.4156	.0009		
14	.5716	.7347	.6701	.3954	.0000		
16	.5493	.7108	.6469	.3747			
18	0.5263	0.6861	0.6229	0.3536			
20	.5026	.6605	.5981	.3320			
22	.4784	.6341	.5725	.3100			
24	.4535	.6070	.5463	.2876			
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 10 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3138	0.6645	0.9039	0.9681	0.839	0.5532	0.1853
22	.2951	.6509	.8940	.9591	.8288	.5380	.1646
20	.2736	.6366	.8830	.9489	.8169	.5221	.1424
18	.2565	.6215	.8709	.9376	.8040	.5057	.1227
16	0.2367	0.6057	0.8577	0.9252	0.7901	0.4886	0.1015
14	.2167	.5891	.8435	.9116	.7752	.4709	.0802
12	.1964	.5718	.8283	.8969	.7594	.4526	.0587
10	.1758	.5538	.8120	.8811	.7427	.4338	.0372
8	0.1551	0.5352	0.7948	0.8643	0.7251	0.4145	0.0157
6	.1341	.5158	.7765	.8463	.7145	.3946	.0000
4	.1130	.4959	.7574	.8274	.6872	.3743	
2	.0918	.4753	.7373	.8075	.6670	.3535	
0	0.0704	0.4542	0.7163	0.7865	0.6460	0.3323	
Minus 2	0.0490	0.4325	0.6945	0.7647	0.6242	0.3107	
4	.0274	.4103	.6718	.7418	.6016	.2887	
6	.0058	.3876	.6482	.7181	.5783	.2664	
8	.0000	.3644	.6240	.6935	.5543	.2437	
10		0.3408	0.5989	0.6681	0.5296	0.2207	
12		.3168	.5731	.6418	.5043	.1975	
14		.2923	.5466	.6147	.4784	.1740	
16		.2676	.5195	.5870	.4519	.1505	
18		0.2424	0.4917	0.5585	0.4248	0.1265	
20		.2170	.4633	.5293	.3972	.1025	
22		.1913	.4343	.4994	.3691	.0783	
24		.1654	.4049	.4690	.3406	.0541	
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 20 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3517	0.7099	0.9382	0.9754	0.8115	0.4905	0.0983
22	.3358	.6994	.9311	.9689	.8025	.4767	.0786
20	.3195	.6880	.9229	.9611	.7925	.4623	.0589
18	.3028	.6758	.9135	.9522	.7816	.4473	.0390
16	0.2858	0.6627	0.9030	0.9421	0.7697	0.4318	0.0191
14	.2684	.6489	.8914	.9309	.7568	.4158	.0000
12	.2506	.6342	.8787	.9185	.7431	.3993	
10	.2326	.6188	.8650	.9051	.7284	.3823	
8	0.2143	0.6037	0.8501	0.8905	0.7128	0.3648	
6	.1957	.5857	.8343	.8748	.6978	.3469	
4	.1769	.5681	.8175	.8581	.6791	.3285	
2	.1580	.5498	.7996	.8403	.6610	.3098	
0	0.1387	0.5309	0.7808	0.8215	0.6421	0.2906	
Minus 2	0.1195	0.5112	0.7610	0.8017	0.6224	0.2712	
4	.0998	.4910	.7403	.7813	.6020	.2514	
6	.0801	.4701	.7186	.7592	.5807	.2313	
8	.0603	.4487	.6962	.7365	.5589	.2109	
10	0.0405	0.4267	0.6729	0.7130	0.5363	0.1902	
12	.0207	.4043	.6487	.6885	.5131	.1693	
14	.0007	.3813	.6238	.6633	.4892	.1482	
16	.0000	.3581	.5981	.6372	.4648	.1272	
18		0.3340	0.5717	0.6104	0.4398	0.1052	
20		.3097	.5445	.5828	.4137	.0839	
22		.2850	.5167	.5545	.3882	.0623	
24		.2600	.4883	.5255	.3616	.0406	
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0700
	Solar time (southwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 30 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3849	0.7452	0.9628	0.9737	0.7772	0.4258	0.0137
22	.3719	.7397	.9584	.9695	.7701	.4134	.0000
20	.3491	.7312	.9529	.9642	.7620	.4005	
18	.3445	.7219	.9463	.9577	.7530	.3871	
16	0.3304	0.7116	0.9384	0.9500	0.7431	0.3733	
14	.3167	.7005	.9295	.9431	.7323	.3591	
12	.3006	.6886	.9194	.9311	.7206	.3444	
10	.2852	.6758	.9081	.9200	.7081	.3292	
8	0.2694	0.6622	0.8958	0.9077	0.6946	0.3137	
6	.2533	.6478	.8824	.8943	.6823	.2978	
4	.2369	.6326	.8679	.8799	.6652	.2815	
2	.2227	.6166	.8524	.8643	.6493	.2649	
0	0.2032	0.5998	0.8360	0.8478	0.6328	0.2479	
Minus 2	0.1862	0.5824	0.8182	0.8301	0.6151	0.2307	
4	.1685	.5642	.7996	.8115	.5969	.2131	
6	.1509	.5453	.7798	.7929	.5777	.1953	
8	.1330	.5258	.7595	.7713	.5583	.1780	
10	0.1150	0.5058	0.7380	0.7498	0.5379	0.1590	
12	.0969	.4849	.7157	.7274	.5169	.1406	
14	.0786	.4635	.6924	.7041	.4953	.1220	
16	.0603	.4419	.6684	.6799	.4731	.1036	
18	0.0419	0.4191	0.6435	0.6549	0.4503	0.0844	
20	.0234	.3961	.6178	.6291	.4269	.0654	
22	.0049	.3726	.5914	.6025	.4030	.0463	
24	.0000	.3487	.5643	.5752	.3786	.0272	
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 40 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4132	0.7766	0.9782	0.9642	0.7383	0.3610	0.0000
22	.4031	.7718	.9765	.9623	.7330	.3501	
20	.3925	.7662	.9737	.9593	.7270	.3388	
18	.3814	.7596	.9696	.9550	.7198	.3270	
16	0.3699	0.7521	0.9644	0.9496	0.7119	0.3149	
14	.3579	.7437	.9580	.9431	.7031	.3024	
12	.3455	.7345	.9504	.9354	.6935	.2895	
10	.3329	.7242	.9417	.9266	.6830	.2763	
8	0.3194	0.7095	0.9318	0.9166	0.6717	0.2648	
6	.3057	.7012	.9207	.9055	.6622	.2489	
4	.2917	.6884	.9086	.8933	.6466	.2346	
2	.2775	.6748	.8954	.8801	.6329	.2202	
0	0.2626	0.6603	0.8810	0.8657	0.6184	0.2054	
Minus 2	0.2479	0.6450	0.8656	0.8503	0.6032	0.1904	
4	.2323	.6289	.8492	.8339	.5872	.1752	
6	.2166	.6121	.8314	.8164	.5703	.1598	
8	.2007	.5946	.8132	.7980	.5531	.1441	
10	0.1846	0.5763	0.7937	0.7786	0.5350	0.1283	
12	.1683	.5573	.7732	.7582	.5163	.1123	
14	.1517	.5376	.7518	.7369	.4970	.0962	
16	.1350	.5177	.7295	.7147	.4770	.0805	
18	0.1181	0.4963	0.7062	0.6917	0.4565	0.0637	
20	.1010	.4747	.6822	.6678	.4354	.0473	
22	.0838	.4526	.6573	.6431	.4138	.0308	
24	.0666	.4299	.6315	.6176	.3916	.0143	
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 50 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4367	0.7983	0.9855	0.9484	0.6967	0.2980	0.0000
22	.4294	.7963	.9864	.9487	.6932	.2885	
20	.4215	.7934	.9860	.9478	.6889	.2787	
18	.4131	.7894	.9844	.9457	.6837	.2685	
16	0.4042	0.7846	0.9817	0.9425	0.6777	0.2581	
14	.3948	.7788	.9777	.9382	.6709	.2473	
12	.3849	.7720	.9725	.9327	.6632	.2363	
10	.3745	.7643	.9662	.9261	.6548	.2249	
8	0.3638	0.7557	0.9587	0.9183	0.6455	0.2133	
6	.3525	.7461	.9500	.9095	.6386	.2014	
4	.3408	.7356	.9401	.8995	.6247	.1892	
2	.3290	.7243	.9291	.8884	.6131	.1769	
0	0.3162	0.7120	0.9069	0.8763	0.6008	0.1643	
Minus 2	0.3037	0.6989	0.9037	0.8631	0.5877	0.1515	
4	.2901	.6849	.8894	.8488	.5739	.1385	
6	.2765	.6701	.8737	.8335	.5592	.1254	
8	.2625	.6545	.8575	.8172	.5443	.1121	
10	0.2483	0.6381	0.8399	0.7999	0.5285	0.0987	
12	.2337	.6209	.8214	.7816	.5121	.0851	
14	.2189	.6029	.8018	.7623	.4950	.0715	
16	.2038	.5848	.7813	.7422	.4773	.0583	
18	0.1884	0.5648	0.7598	0.7211	0.4591	0.0439	
20	.1728	.5447	.7374	.6991	.4402	.0301	
22	.1570	.5240	.7141	.6763	.4209	.0161	
24	.1410	.5026	.6899	.6527	.4010	.0022	
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 7.--Sin θ latitude 42°--continued

Latitude: 42°
Slope: 60 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4558	0.8136	0.9863	0.9279	0.6540	0.2379	0.0000
22	.4510	.8140	.9895	.9302	.6521	.2297	
20	.4456	.8136	.9914	.9313	.6495	.2215	
18	.4398	.8121	.9921	.9313	.6461	.2129	
16	0.4333	0.8097	0.9916	0.9302	0.6419	0.2040	
14	.4264	.8063	.9899	.9279	.6369	.1949	
12	.4189	.8020	.9870	.9245	.6318	.1856	
10	.4109	.7966	.9829	.9200	.6247	.1760	
8	0.4025	0.7903	0.9776	0.9143	0.6173	0.1663	
6	.4053	.7830	.9711	.9075	.6129	.1563	
4	.3841	.7747	.9634	.8997	.6005	.1461	
2	.3745	.7655	.9546	.8907	.5910	.1358	
0	0.3638	0.7554	0.9446	0.8807	0.5808	0.1253	
Minus 2	0.3534	0.7443	0.9334	0.8695	0.5698	0.1146	
4	.3418	.7324	.9211	.8573	.5582	.1038	
6	.3301	.7195	.9074	.8441	.5456	.0929	
8	.3180	.7058	.8932	.8299	.5329	.0818	
10	0.3056	0.6912	0.8775	0.8146	0.5193	0.0707	
12	.2928	.6758	.8609	.7983	.5050	.0594	
14	.2796	.6595	.8431	.7811	.4901	.0481	
16	.2661	.6432	.8244	.7629	.4747	.0375	
18	0.2522	0.6247	0.8046	0.7438	0.4586	0.0254	
20	.2381	.6061	.7838	.7238	.4420	.0139	
22	.2236	.5867	.7621	.7029	.4248	.0025	
24	.2089	.5667	.7395	.6811	.4071	.0000	
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 70 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4708	0.8233	0.9819	0.9044	0.6115	0.1819	0.0000
22	.4684	.8261	.9872	.9085	.6112	.1748	
20	.4655	.8279	.9912	.9115	.6101	.1679	
18	.4619	.8287	.9940	.9133	.6084	.1608	
16	0.4578	0.8286	0.9956	0.9141	0.6058	0.1535	
14	.4532	.8274	.9960	.9137	.6026	.1459	
12	.4479	.8253	.9952	.9122	.5985	.1383	
10	.4422	.8221	.9932	.9103	.5938	.1304	
8	0.4359	0.8176	0.9899	0.9059	0.5884	0.1224	
6	.4291	.8127	.9855	.9011	.5863	.1142	
4	.4217	.8065	.9798	.8952	.5753	.1062	
2	.4142	.7994	.9730	.8882	.5677	.0975	
0	0.4055	0.7912	0.9650	0.8801	0.5595	0.0889	
Minus 2	0.3971	0.7821	0.9558	0.8710	0.5505	0.0802	
4	.3873	.7721	.9454	.8608	.5409	.0714	
6	.3775	.7611	.9335	.8495	.5303	.0626	
8	.3672	.7492	.9212	.8372	.5197	.0537	
10	0.3565	0.7341	0.9075	0.8239	0.5081	0.0454	
12	.3453	.7226	.8926	.8096	.4959	.0356	
14	.3337	.7080	.8766	.7943	.4831	.0260	
16	.3217	.6933	.8596	.7780	.4698	.0182	
18	0.3094	0.6762	0.8415	0.7608	0.4558	0.0083	
20	.2966	.6591	.8224	.7426	.4413	.0000	
22	.2835	.6412	.8022	.7236	.4263		
24	.2700	.6224	.7811	.7036	.4107		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 7.--Sin θ, latitude 42° - continued

Latitude: 42°
Slope: 80 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4825	0.8286	0.9737	0.8791	0.5702	0.1297	0.0000
22	.4823	.8335	.9808	.8849	.5713	.1241	
20	.4815	.8374	.9867	.8895	.5717	.1185	
18	.4801	.8403	.9915	.8930	.5714	.1126	
16	0.4781	0.8422	0.9950	0.8955	0.5704	0.1067	
14	.4756	.8431	.9973	.8968	.5687	.1007	
12	.4725	.8429	.9984	.8971	.5663	.0945	
10	.4687	.8417	.9982	.8963	.5632	.0883	
8	0.4645	0.8395	0.9969	0.8944	0.5595	0.0819	
6	.4596	.8363	.9943	.8914	.5594	.0754	
4	.4542	.8320	.9905	.8873	.5499	.0688	
2	.4486	.8268	.9856	.8821	.5441	.0621	
0	0.4417	0.8205	0.9794	0.8759	0.5377	0.0554	
Minus 2	0.4352	0.8132	0.9720	0.8686	0.5305	0.0486	
4	.4271	.8049	.9635	.8602	.5228	.0417	
6	.4190	.7957	.9533	.8508	.5140	.0348	
8	.4103	.7855	.9428	.8403	.5054	.0278	
10	0.4013	0.7743	0.9308	0.8288	0.4958	0.0208	
12	.3917	.7622	.9176	.8163	.4855	.0138	
14	.3816	.7491	.9033	.8029	.4747	.0067	
16	.3711	.7360	.8879	.7884	.4633	.0005	
18	0.3601	0.7203	0.8714	0.7730	0.4513	0.0000	
20	.3487	.7046	.8539	.7566	.4388		
22	.3368	.6880	.8353	.7393	.4257		
24	.3245	.6705	.8157	.7211	.4122		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 90 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4915	0.8305	0.9628	0.8530	0.5307	0.0820	0.0000
22	.4932	.8372	.9716	.8602	.5330	.0776	
20	.4944	.8430	.9792	.8664	.5347	.0731	
18	.4949	.8478	.9857	.8713	.5358	.0691	
16	0.4949	0.8516	0.9909	0.8753	0.5362	0.0640	
14	.4943	.8543	.9949	.8783	.5359	.0593	
12	.4930	.8559	.9977	.8801	.5350	.0545	
10	.4911	.8566	.9993	.8809	.5335	.0497	
8	0.4888	0.8562	0.9997	0.8807	0.5312	0.0449	
6	.4857	.8547	.9988	.8794	.5331	.0399	
4	.4820	.8522	.9968	.8768	.5249	.0349	
2	.4782	.8487	.9935	.8733	.5207	.0304	
0	0.4730	0.8441	0.9890	0.8688	0.5160	0.0248	
Minus 2	0.4682	0.8385	0.9833	0.8631	0.5106	0.0197	
4	.4617	.8319	.9764	.8565	.5045	.0145	
6	.4552	.8242	.9679	.8487	.4975	.0094	
8	.4481	.8156	.9591	.8400	.4906	.0043	
10	0.4405	0.8059	0.9487	0.8302	0.4828	0.0000	
12	.4324	.7953	.9371	.8194	.4744		
14	.4237	.7837	.9243	.8076	.4654		
16	.4145	.7721	.9105	.7949	.4558		
18	0.4048	0.7577	0.8955	0.7811	0.4457		
20	.3946	.7433	.8795	.7664	.4350		
22	.3839	.7280	.8606	.7508	.4238		
24	.3728	.7118	.8442	.7343	.4120		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 100 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4981	0.8298	0.9501	0.8270	0.4934	0.0387	0.0000
22	.5016	.8382	.9604	.8355	.4968	.0352	
20	.5046	.8457	.9696	.8429	.4997	.0319	
18	.5069	.8521	.9775	.8493	.5020	.0285	
16	0.5086	0.8576	0.9843	0.8547	0.5037	0.0251	
14	.5097	.8619	.9899	.8591	.5047	.0216	
12	.5102	.8653	.9942	.8624	.5057	.0182	
10	.5100	.8675	.9973	.8646	.5049	.0147	
8	0.5093	0.8688	0.9993	0.8658	0.5041	0.0112	
6	.5079	.8689	1.0000	.8660	.5077	.0077	
4	.5059	.8680	.9995	.8650	.5007	.0041	
2	.5037	.8661	.9978	.8631	.4981	.0006	
0	0.5000	0.8630	0.9948	0.8601	0.4948	0.0000	
Minus 2	0.4967	0.8590	0.9907	0.8560	0.4910		
4	.4917	.8539	.9853	.8509	.4865		
6	.4867	.8477	.9783	.8447	.4811		
8	.4809	.8405	.9711	.8375	.4759		
10	0.4748	0.8323	0.9621	0.8293	0.4697		
12	.4680	.8231	.9520	.8201	.4629		
14	.4606	.8128	.9407	.8099	.4555		
16	.4526	.8025	.9283	.7987	.4477		
18	0.4441	0.7894	0.9148	0.7866	0.4392		
20	.4351	.7763	.9001	.7734	.4302		
22	.4255	.7621	.8843	.7594	.4207		
24	.4155	.7471	.8675	.7444	.4107		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 10 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2407	0.6089	0.8784	0.9771	0.8784	0.6089	0.2407
	22	.2217	.5954	.8689	.9691	.8689	.5954	.2217
	20	.1999	.5811	.8584	.9599	.8584	.5811	.1999
	18	.1829	.5662	.8468	.9495	.8468	.5662	.1829
	16	0.1631	0.5505	0.8341	0.9380	0.8341	0.5505	0.1631
	14	.1432	.5342	.8205	.9253	.8205	.5342	.1432
	12	.1231	.5173	.8059	.9115	.8059	.5173	.1231
	10	.1028	.4997	.7902	.8966	.7902	.4997	.1028
	8	0.0824	0.4815	0.7736	0.8806	0.7736	0.4815	0.0824
	6	.0619	.4627	.7561	.8635	.7561	.4627	.0619
	4	.0413	.4433	.7376	.8453	.7376	.4433	.0413
	2	.0206	.4234	.7183	.8262	.7183	.4234	.0206
	0	0.0000	0.4030	0.6981	0.8060	0.6981	0.4030	0.0000
Minus	2		0.3821	0.6770	0.7849	0.6770	0.3821	
	4		.3607	.6551	.7628	.6551	.3607	
	6		.3389	.6323	.7397	.6323	.3389	
	8		.3167	.6089	.7158	.6089	.3167	
	10		0.2941	0.5847	0.6910	0.5847	0.2941	
	12		.2711	.5597	.6654	.5597	.2711	
	14		.2479	.5341	.6389	.5341	.2479	
	16		.2245	.5079	.6117	.5079	.2245	
	18		0.2004	0.4810	0.5837	0.4810	0.2004	
	20		.1763	.4535	.5550	.4535	.1763	
	22		.1519	.4255	.5256	.4255	.1519	
	24		.1274	.3970	.4956	.3970	.1274	

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 20 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2076	0.6004	0.8879	0.9932	0.8879	0.6004	0.2076
	22	.1912	.5898	.8817	.9885	.8817	.5898	.1912
	20	.1746	.5786	.8744	.9826	.8744	.5786	.1746
	18	.1577	.5666	.8660	.9756	.8660	.5666	.1577
	16	0.1407	0.5540	0.8566	0.9673	0.8566	0.5540	0.1407
	14	.1235	.5407	.8461	.9579	.8461	.5407	.1235
	12	.1061	.5267	.8346	.9473	.8346	.5267	.1061
	10	.0886	.5121	.8221	.9355	.8221	.5121	.0886
	8	0.0711	0.4968	0.8085	0.9226	0.8085	0.4968	0.0711
	6	.0533	.4810	.7940	.9086	.7940	.4810	.0533
	4	.0356	.4645	.7785	.8934	.7785	.4645	.0356
	2	.0178	.4475	.7621	.8772	.7621	.4475	.0178
	0	0.0000	0.4300	0.7447	0.8599	0.7447	0.4300	0.0000
Minus	2		0.4119	0.7265	0.8416	0.7265	0.4119	
	4		.3933	.7073	.8222	.7073	.3933	
	6		.3743	.6871	.8019	.6871	.3743	
	8		.3548	.6665	.7805	.6665	.3548	
	10		0.3348	0.6448	0.7583	0.6448	0.3348	
	12		.3145	.6223	.7350	.6223	.3145	
	14		.2937	.5992	.7109	.5992	.2937	
	16		.2730	.5752	.6859	.5752	.2730	
	18		0.2512	0.5506	0.6601	0.5506	0.2512	
	20		.2295	.5253	.6335	.5253	.2295	
	22		.2075	.4993	.6061	.4993	.2075	
	24		.1852	.4727	.5780	.4727	.1852	

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 30 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.1738	0.5868	0.8891	0.9997	0.8891	0.5868	0.1738
	22	.1601	.5792	.8860	.9983	.8860	.5792	.1601
	20	.1368	.5709	.8819	.9948	.8819	.5709	.1368
	18	.1320	.5619	.8767	.9918	.8767	.5619	.1320
	16	0.1178	0.5523	0.8704	0.9869	0.8704	0.5523	0.1178
	14	.1031	.5420	.8631	.9835	.8631	.5420	.1031
	12	.0889	.5310	.8547	.9732	.8547	.5310	.0889
	10	.0742	.5194	.8453	.9646	.8453	.5194	.0742
	8	0.0595	0.5071	0.8348	0.9548	0.8348	0.5071	0.0595
	6	.0447	.4942	.8233	.9438	.8233	.4942	.0447
	4	.0297	.4807	.8109	.9317	.8109	.4807	.0297
	2	.0149	.4667	.7974	.9184	.7974	.4667	.0149
	0	0.0000	0.4520	0.7831	0.9041	0.7831	0.4520	0.0000
Minus	2		0.4369	0.7676	0.8886	0.7676	0.4369	
	4		.4211	.7512	.8721	.7512	.4211	
	6		.4049	.7337	.8544	.7337	.4049	
	8		.3882	.7159	.8358	7159	3882	
	10		0.3710	0.6969	0.8161	0.6969	0.3710	
	12		.3533	.6768	.7955	.6768	.3533	
	14		.3352	.6563	.7738	.6563	.3352	
	16		.3173	.6348	.7513	.6348	.3173	
	18		0.2976	0.6126	0.7278	0.6126	0.2976	
	20		.2786	.5896	.7034	.5896	.2786	
	22		.2590	.5659	.6781	.5659	.2590	
	24		.2391	.5414	.6521	.5414	.2391	

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 40 percent
Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.1405	0.5666	0.8829	0.9978	0.8829	0.5666	0.4405
	22	.1293	.5644	.8829	.9995	.8829	.5644	.1293
	20	.1181	.5590	.8818	1.0000	.8818	.5590	.1181
	18	.1067	.5529	.8797	.9993	.8797	.5529	.1067
	16	0.0952	0.5462	0.8765	0.9973	0.8765	0.5462	0.0952
	14	.0835	.5388	.8722	.9941	.8722	.5388	.0835
	12	.0718	.5308	.8668	.9898	.8668	.5308	.0718
	10	.0599	.5221	.8604	.9842	.8604	.5221	.0599
	8	0.0481	0.5117	0.8529	0.9774	0.8529	0.5117	0.0481
	6	.0461	.5027	.8444	.9695	.8444	.5027	.0461
	4	.0241	.4922	.8349	.9603	.8349	.4922	.0241
	2	.0120	.4810	.8243	.9500	.8243	.4810	.0120
	0	0.0000	0.4692	0.8128	0.9385	0.8128	0.4692	0.0000
Minus	2		0.4569	0.8002	0.9259	0.8002	0.4569	
	4		.4440	.7867	.9121	.7867	.4440	
	6		.4306	.7719	.8973	.7719	.4306	
	8		.4166	.7568	.8813	.7568	.4166	
	10		0.4022	0.7405	0.8643	0.7405	0.4022	
	12		.3872	.7232	.8462	.7232	.3872	
	14		.3718	.7051	.8279	.7051	.3718	
	16		.3566	.6861	.8070	.6861	.3566	
	18		0.3396	0.6663	0.7859	0.6663	0.3396	
	20		.3229	.6457	.7638	.6457	.3229	
	22		.3057	.6242	.7408	.6242	.3057	
	24		.2882	.6021	.7169	.6021	.2882	

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 50 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.1083	0.5486	0.8709	0.9889	0.8709	0.5486	0.1083
	22	.0997	.5465	.8737	.9935	.8737	.5465	.0997
	20	.0910	.5439	.8755	.9968	.8755	.5439	.0910
	18	.0823	.5405	.8762	.9990	.8762	.5405	.0823
	16	0.0734	0.5366	0.8758	0.9999	0.8758	0.5366	0.0734
	14	.0644	.5320	.8744	.9997	.8744	.5320	.0644
	12	.0553	.5267	.8719	.9982	.8719	.5267	.0553
	10	.0462	.5208	.8683	.9955	.8683	.5208	.0462
	8	0.0371	0.5143	0.8637	0.9916	0.8637	0.5143	0.0371
	6	.0278	.5071	.8580	.9865	.8580	.5071	.0278
	4	.0185	.4993	.8513	.9801	.8513	.4993	.0185
	2	.0092	.4910	.8436	.9726	.8436	.4910	.0092
	0	0.0000	0.4819	0.8348	0.9639	0.8348	0.4819	0.0000
Minus	2		0.4724	0.8250	0.9541	0.8250	0.4724	
	4		.4622	.8142	.9430	.8142	.4622	
	6		.4515	.8020	.9308	.8020	.4515	
	8		.4402	.7896	.9175	.7896	.4402	
	10		0.4284	0.7759	0.9031	0.7759	0.4284	
	12		.4161	.7612	.8875	.7612	.4161	
	14		.4033	.7456	.8709	.7456	.4033	
	16		.3908	.7291	.8532	.7291	.3908	
	18		0.3761	0.7117	0.8345	0.7117	0.3761	
	20		.3619	.6934	.8148	.6934	.3619	
	22		.3472	.6743	.7940	.6743	.3472	
	24		.3320	.6544	.7723	.6544	.3320	

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 60 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0779	0.5263	0.8544	0.9745	0.8544	0.5263	0.0779
	22	.0717	.5267	.8589	.9817	.8589	.5267	.0717
	20	.0655	.5266	.8642	.9878	.8642	.5266	.0655
	18	.0592	.5258	.8675	.9926	.8675	.5258	.0592
	16	0.0528	0.5245	0.8698	0.9962	0.8698	0.5245	0.0528
	14	.0463	.5225	.8711	.9987	.8711	.5225	.0463
	12	.0398	.5198	.8712	.9999	.8712	.5198	.0398
	10	.0332	.5165	.8703	.9998	.8703	.5165	.0332
	8	0.0267	0.5126	0.8684	0.9986	0.8684	0.5126	0.0267
	6	.0200	.5081	.8654	.9961	.8654	.5081	.0200
	4	.0133	.5029	.8613	.9925	.8613	.5029	.0133
	2	.0066	.4971	.8530	.9876	.8530	.4971	.0066
	0	0.0000	0.4907	0.8500	0.9815	0.8500	0.4907	0.0000
Minus	2		0.4838	0.8428	0.9742	0.8428	0.4838	
	4		.4762	.8346	.9657	.8346	.4762	
	6		.4681	.8249	.9561	.8249	.4681	
	8		.4593	.8151	.9453	.8151	.4593	
	10		0.4500	0.8038	0.9333	0.8038	0.4500	
	12		.4402	.7916	.9203	.7916	.4402	
	14		.4299	.7785	.9060	.7785	.4299	
	16		.4199	.7642	.8907	.7642	.4199	
	18		0.4076	0.7493	0.8743	0.7493	0.4076	
	20		.3957	.7333	.8568	.7333	.3957	
	22		.3833	.7164	.8383	.7164	.3833	
	24		.3705	.6987	.8188	.6987	.3705	

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 70 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0496	0.5031	0.8349	0.9563	0.8349	0.5031	0.0496
	22	.0457	.5058	.8427	.9660	.8427	.5058	.0457
	20	.0416	.5080	.8494	.9744	.8494	.5080	.0416
	18	.0377	.5096	.8552	.9817	.8552	.5096	.0377
	16	0.0336	0.5106	0.8599	0.9877	0.8599	0.5106	0.0336
	14	.0295	.5110	.8635	.9926	.8635	.5110	.0295
	12	.0254	.5108	.8661	.9962	.8661	.5108	.0254
	10	.0212	.5099	.8677	.9986	.8677	.5099	.0212
	8	0.0170	0.5084	0.8682	0.9998	0.8682	0.5084	0.0170
	6	.0127	.5063	.8676	.9999	.8676	.5063	.0127
	4	.0085	.5035	.8660	.9986	.8660	.5035	.0085
	2	.0042	.5002	.8633	.9962	.8633	.5002	.0042
	0	0.0000	0.4963	0.8595	0.9925	0.8595	0.4963	0.0000
Minus	2		0.4917	0.8548	0.9877	0.8548	0.4917	
	4		.4865	.8489	.9816	.8489	.4865	
	6		.4808	.8416	.9743	.8416	.4808	
	8		.4745	.8342	.9659	.8342	.4745	
	10		0.4664	0.8253	0.9563	0.8253	0.4664	
	12		.4600	.8154	.9455	.8154	.4600	
	14		.4520	.8045	.9335	.8045	.4520	
	16		.4445	.7926	.9205	.7926	.4445	
	18		0.4343	0.7798	0.9063	0.7798	0.4343	
	20		.4246	.7660	.8909	.7660	.4246	
	22		.4144	.7512	.8745	.7512	.4144	
	24		.4037	.7356	.8571	.7356	.4037	

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 80 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0237	0.4798	0.8135	0.9357	0.8135	0.4798	0.0237
	22	.0218	.4846	.8234	.9475	.8234	.4846	.0218
	20	.0199	.4889	.8323	.9580	.8323	.4889	.0199
	18	.0180	.4926	.8402	.9674	.8402	.4926	.0180
	16	0.0161	0.4958	0.8471	0.9757	0.8471	0.4958	0.0161
	14	.0141	.4984	.8530	.9827	.8530	.4984	.0141
	12	.0121	.5003	.8578	.9886	.8578	.5003	.0121
	10	.0101	.5017	.8615	.9933	.8615	.5017	.0101
	8	0.0082	0.5024	0.8643	0.9967	0.8643	0.5024	0.0082
	6	.0061	.5025	.8659	.9989	.8659	.5025	.0061
	4	.0040	.5020	.8665	.9999	.8665	.5020	.0040
	2	.0020	.5009	.8661	.9997	.8661	.5009	.0020
	0	0.0000	0.4991	0.8645	0.9983	0.8645	0.4991	0.0000
Minus	2		0.4968	0.8620	0.9957	0.8620	0.4968	
	4		.4939	.8584	.9918	.8584	.4939	
	6		.4903	.8532	.9867	.8532	.4903	
	8		.4862	.8480	.9805	.8480	.4862	
	10		0.4814	0.8413	0.9730	0.8413	0.4814	
	12		.4761	.8335	.9644	.8335	.4761	
	14		.4702	.8248	.9545	.8248	.4702	
	16		.4649	.8150	.9436	.8150	.4649	
	18		0.4567	0.8042	0.9340	0.8042	0.4567	
	20		.4491	.7925	.9182	.7925	.4491	
	22		.4410	.7798	.9038	.7798	.4410	
	24		.4323	.7661	.8883	.7661	.4323	

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 90 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0000	0.4570	0.7912	0.9135	0.7912	0.4570	0.0000
	22		.4636	.8031	.9272	.8031	.4636	
	20		.4699	.8139	.9398	.8139	.4699	
	18		.4755	.8237	.9510	.8237	.4755	
	16		0.4806	0.8325	0.9612	0.8325	0.4806	
	14		.4851	.8403	.9702	.8403	.4851	
	12		.4891	.8471	.9781	.8471	.4891	
	10		.4924	.8529	.9847	.8529	.4924	
	8		0.4952	0.8576	0.9903	0.8576	0.4952	
	6		.4973	.8613	.9945	.8613	.4973	
	4		.4988	.8639	.9974	.8639	.4988	
	2		.4997	.8655	.9992	.8655	.4997	
	0		0.5000	0.8660	0.9998	0.8660	0.5000	
Minus	2		0.4997	0.8655	0.9992	0.8655	0.4997	
	4		.4987	.8639	.9974	.8639	.4987	
	6		.4972	.8607	.9943	.8607	.4972	
	8		.4951	.8575	.9900	.8575	.4951	
	10		0.4923	0.8528	0.9845	0.8528	0.4923	
	12		.4890	.8471	.9779	.8471	.4890	
	14		.4851	.8402	.9700	.8402	.4851	
	16		.4818	.8324	.9610	.8324	.4818	
	18		0.4755	0.8236	0.9507	0.8236	0.4755	
	20		.4698	.8137	.9394	.8137	.4698	
	22		.4635	.8029	.9269	.8029	.4635	
	24		.4567	.7911	.9132	.7911	.4567	

Table 7.--Sin θ, latitude 42°--continued

Latitude: 42°
Slope: 100 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24		0.4350	0.7688	0.8910	0.7688	0.4350	
	22		.4433	.7823	.9063	.7823	.4433	
	20		.4513	.7948	.9205	.7948	.4513	
	18		.4586	.8063	.9336	.8063	.4586	
	16		0.4655	0.8169	0.9455	0.8169	0.4655	
	14		.4718	.8265	.9563	.8265	.4718	
	12		.4775	.8351	.9659	.8351	.4775	
	10		.4826	.8426	.9744	.8426	.4826	
	8		0.4872	0.8491	0.9816	0.8491	0.4872	
	6		.4911	.8546	.9777	.8546	.4911	
	4		.4944	.8591	.9925	.8591	.4944	
	2		.4972	.8625	.9962	.8625	.4972	
	0	0.0000	0.4993	0.8648	0.9986	0.8648	0.4993	0.0000
Minus	2	0.0019	0.5008	0.8661	0.9999	0.8661	0.5008	0.0019
	4	.0037	.5017	.8664	.9999	.8664	.5017	.0037
	6	.0055	.5021	.8650	.9986	.8650	.5021	.0055
	8	.0072	.5017	.8637	.9962	.8637	.5017	.0072
	10	0.0091	0.5008	0.8608	0.9925	0.8608	0.5008	0.0091
	12	.0109	.4993	.8568	.9877	.8568	.4993	.0109
	14	.0126	.4971	.8518	.9816	.8518	.4971	.0126
	16	.0144	.4957	.8458	.9744	.8458	.4957	.0144
	18	0.0162	0.4911	0.8387	0.9659	0.8387	0.4911	0.0162
	20	.0179	.4871	.8306	.9563	.8306	.4871	.0179
	22	.0196	.4825	.8215	.9455	.8215	.4825	.0196
	24	.0213	.4774	.8113	.9336	.8113	.4774	.0213

Table 8.--Values of Sin θ [1/] for latitude 46°

Latitude: 46°
Slope: 0 percent

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2926	0.6099	0.8422	0.9272	0.8422	0.6099	0.2926
	22	.2695	.5915	.8273	.9135	.8273	.5915	.2695
	20	.2460	.5724	.8113	.8988	.8113	.5724	.2460
	18	.2223	.5526	.7945	.8829	.7945	.5526	.2223
	16	0.1983	0.5321	0.7766	0.8660	0.7766	0.5321	0.1983
	14	.1740	.5110	.7578	.8481	.7578	.5110	.1740
	12	.1496	.4893	.7380	.8290	.7380	.4893	.1496
	10	.1249	.4670	.7174	.8090	.7174	.4670	.1249
	8	0.1001	0.4441	0.6959	0.7880	0.6959	0.4441	0.1001
	6	.0752	.4206	.6735	.7660	.6735	.4206	.0752
	4	.0502	.3967	.6503	.7431	.6503	.3967	.0502
	2	.0251	.3722	.6263	.7193	.6263	.3722	.0251
	0	0.0000	0.3473	0.6016	0.6947	0.6016	0.3473	0.0000
Minus	2		0.3220	0.5761	0.6691	0.5761	0.3220	
	4		.2963	.5500	.6428	.5500	.2963	
	6		.2702	.5231	.6157	.5231	.2702	
	8		.2438	.4956	.5878	.4956	.2438	
	10		0.2171	0.4675	0.5592	0.4675	0.2171	
	12		.1902	.4389	.5299	.4389	.1902	
	14		.1630	.4097	.5000	.4097	.1630	
	16		.1356	.3800	.4695	.3800	.1356	
	18		0.1080	0.3499	0.4384	0.3499	0.1080	
	20		.0804	.3193	.4067	.3193	.0804	
	22		.0526	.2883	.3746	.2883	.0526	
	24		.0247	.2570	.3420	.2570	.0247	

1/ For zero slope Sin θ = Sin A.

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 10 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3192	0.6027	0.8093	0.8853	0.8093	0.6027	0.3192
	22	.2940	.5813	.7972	.8685	.7972	.5813	.2940
	20	.2685	.5596	.7727	.8507	.7727	.5596	.2685
	18	.2425	.5372	.7529	.8319	.7529	.5372	.2425
	16	0.2163	0.5142	0.7322	0.8120	0.7322	0.5142	0.2163
	14	.1899	.4905	.7106	.7911	.7106	.4905	.1899
	12	.1632	.4662	.6881	.7693	.6881	.4662	.1632
	10	.1363	.4414	.6648	.7465	.6648	.4414	.1363
	8	0.1092	.4160	.6406	.7228	.6406	.4160	0.1092
	6	.0821	.3902	.6157	.6983	.6157	.3902	.0821
	4	.0547	.3638	.5901	.6729	.5901	.3638	.0547
	2	.0274	.3370	.5637	.6467	.5637	.3370	.0274
	0	0.0000	0.3098	0.5366	0.6196	0.5366	0.3098	0.0000
Minus	2		0.2823	0.5089	0.5919	0.5089	0.2823	
	4		.2543	.4806	.5634	.4806	.2543	
	6		.2261	.4517	.5342	.4517	.2261	
	8		.1976	.4221	.5044	.4221	.1976	
	10		0.1688	0.3921	0.4739	0.3921	0.1688	
	12		.1399	.3617	.4429	.3617	.1399	
	14		.1107	.3308	.4114	.3308	.1107	
	16		.0815	.2995	.3793	.2995	.0815	
	18		0.0521	0.2678	0.3468	0.2678	0.0521	
	20		.0227	.2358	.3138	.2358	.0227	
	22		.0000	.2035	.2805	.2035	.0000	
	24			.1710	.2468	.1710		

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 20 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3523	0.5891	0.7696	0.8357	0.7696	0.5891	0.3523
	22	.3153	.5657	.7490	.8160	.7490	.5657	.3153
	20	.2879	.5415	.7274	.7954	.7274	.5415	.2879
	18	.2601	.5169	.7049	.7737	.7049	.5169	.2601
	16	0.2320	0.4916	0.6816	0.7511	0.6816	0.4916	0.2320
	14	.2036	.4656	.6574	.7277	.6574	.4656	.2036
	12	.1750	.4391	.6325	.7033	.6325	.4391	.1750
	10	.1461	.4121	.6068	.6780	.6068	.4121	.1461
	8	0.1171	.3845	.5803	.6520	.5803	.3845	0.1171
	6	.0880	.3565	.5531	.6251	.5531	.3565	.0880
	4	.0587	.3283	.5253	.5975	.5253	.3283	.0587
	2	.0293	.2993	.4968	.5691	.4968	.2993	.0293
	0	0.0000	0.2701	0.4677	0.5401	0.4677	0.2701	0.0000
Minus	2		0.2405	0.4381	0.5104	0.4381	0.2405	
	4		.2107	.4079	.4801	.4079	.2107	
	6		.1806	.3772	.4492	.3772	.1806	
	8		.1503	.3461	.4177	.3461	.1503	
	10		0.1198	0.3143	0.3857	0.3143	0.1198	
	12		.0892	.2825	.3533	.2825	.0892	
	14		.0584	.2503	.3205	.2503	.0584	
	16		.0276	.2176	.2872	.2176	.0276	
	18		0.0000	0.1848	0.2536	0.1848	0.0000	
	20			.1517	.2197	.1517		
	22			.1184	.1855	.1184		
	24			.0850	.1511	.0850		

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 30 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3615	0.5710	0.7243	0.7805	0.7243	0.5710	0.3615
	22	.3329	.5455	.7012	.7581	.7012	.5455	.3329
	20	.3039	.5195	.6772	.7349	.6772	.5195	.3039
	18	.2746	.4927	.6524	.7108	.6524	.4927	.2746
	16	0.2449	0.4654	0.6268	0.6858	0.6268	0.4654	0.2449
	14	.2149	.4375	.6004	.6600	.6004	.4375	.2149
	12	.1848	.4091	.5733	.6334	.5733	.4091	.1848
	10	.1543	.3802	.5455	.6060	.5455	.3802	.1543
	8	0.1237	0.3508	0.5170	0.5779	0.5170	0.3508	0.1237
	6	.0929	.3210	.4879	.5490	.4879	.3210	.0929
	4	.0620	.2908	.4582	.5195	.4582	.2908	.0620
	2	.0310	.2602	.4280	.4894	.4280	.2602	.0310
	0	0.0000	0.2293	0.3972	0.4587	0.3972	0.2293	0.0000
Minus	2		0.1982	0.3660	0.4274	0.3660	0.1982	
	4		.1668	.3343	.3956	.3343	.1668	
	6		.1352	.3021	.3633	.3021	.1352	
	8		.1034	.2697	.3305	.2697	.1034	
	10		0.0716	0.2365	0.2974	0.2365	0.0716	
	12		.0396	.2038	.2639	.2038	.0396	
	14		.0075	.1705	.2301	.1705	.0075	
	16		.0000	.1369	.1960	.1369	.0000	
	18			0.1032	0.1616	0.1032		
	20			.0693	.1271	.0693		
	22			.0354	.0924	.0354		
	24			.0015	.0576	.0015		

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 40 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3766	0.5493	0.6755	0.7218	0.6755	0.5493	0.3766
	22	.3469	.5220	.6502	.6971	.6502	.5220	.3469
	20	.3167	.4942	.6241	.6717	.6241	.4942	.3167
	18	.2861	.4658	.5973	.6454	.5973	.4658	.2861
	16	0.2552	0.4368	0.5697	0.6184	0.5697	0.4368	0.2552
	14	.2240	.4073	.5415	.5906	.5415	.4073	.2240
	12	.1925	.3773	.5126	.5630	.5126	.3773	.1925
	10	.1608	.3468	.4830	.5329	.4830	.3468	.1608
	8	0.1289	0.3159	0.4529	0.5030	0.4529	0.3159	0.1289
	6	.0968	.2847	.4222	.4725	.4222	.2847	.0968
	4	.0646	.2531	.3910	.4415	.3910	.2531	.0646
	2	.0322	.2211	.3593	.4099	.3593	.2211	.0322
	0	0.0000	0.1889	0.3272	0.3778	0.3272	0.1889	0.0000
Minus	2		0.1565	0.2947	0.3453	0.2947	0.1565	
	4		.1239	.2618	.3123	.2618	.1239	
	6		.0911	.2286	.2790	.2286	.0911	
	8		.0582	.1952	.2453	.1952	.0582	
	10		0.0253	0.1610	0.2113	0.1610	0.0253	
	12		.0000	.1276	.1771	.1276	.0000	
	14			.0935	.1426	.0935		
	16			.0593	.1080	.0593		
	18			0.0251	0.0732	0.0251		
	20			.0000	.0384	.0000		
	22				.0035			
	24				.0000			

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 50 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3880	0.5250	0.6251	0.6636	0.6251	0.5250	0.3880
	22	.3574	.4963	.5980	.6352	.5980	.4963	.3574
	20	.3263	.4671	.5701	.6079	.5701	.4671	.3263
	18	.2948	.4374	.5416	.5898	.5416	.4374	.2948
	16	0.2630	0.4070	0.5124	0.5510	0.5124	0.4070	0.2630
	18	.2308	.3762	.4826	.5215	.4826	.3762	.2308
	12	.1984	.3449	.4522	.4915	.4522	.3449	.1984
	10	.1657	.3132	.4212	.4607	.4212	.3132	.1657
	8	0.1328	0.2811	0.3897	0.4295	0.3897	0.2811	0.1328
	6	.0997	.2487	.3578	.3977	.3578	.2487	.0997
	4	.0666	.2160	.3254	.3655	.3254	.2160	.0666
	2	.0332	.1830	.2926	.3327	.2926	.1830	.0332
	0	0.0000	0.1498	0.2595	0.2996	0.2595	0.1498	0.0000
Minus	2		0.1164	0.2261	0.2662	0.2261	0.1164	
	4		.0829	.1923	.2323	.1923	.0829	
	6		.0493	.1583	.1983	.1583	.0493	
	8		.0156	.1242	.1639	.1242	.0156	
	10		0.0000	0.0893	0.1294	0.0893	0.0000	
	12			.0555	.0947	.0555		
	14			.0210	.0599	.0210		
	16			.0000	.0251	.0000		
	18				0.0000			
	20							
	22							
	24							

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 60 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4042	0.4994	0.5747	0.6023	0.5747	0.4994	0.4042
	22	.3650	.4695	.5461	.5741	.5461	.4695	.3650
	20	.3332	.4392	.5168	.5452	.5168	.4392	.3332
	18	.3010	.4084	.4869	.5156	.4869	.4084	.3010
	16	0.2685	0.3769	0.4563	0.4854	0.4563	0.3769	0.2685
	14	.2357	.3451	.4252	.4645	.4252	.3451	.2357
	12	.2026	.3129	.3937	.4232	.3937	.3129	.2026
	10	.1692	.2803	.3616	.3913	.3616	.2803	.1692
	8	0.1356	0.2473	0.3290	0.3590	0.3290	0.2473	0.1356
	6	.1019	.2140	.2961	.3262	.2961	.2140	.1019
	4	.0680	.1805	.2628	.2930	.2628	.1805	.0680
	2	.0339	.1467	.2292	.2594	.2292	.1467	.0339
	0	0.0000	0.1228	0.1954	0.2256	0.1954	0.1228	0.0000
Minus	2		0.0787	0.1613	0.1914	0.1613	0.0787	
	4		.0445	.1269	.1571	.1269	.0445	
	6		.0103	.0925	.1225	.0925	.0103	
	8		.0000	.0579	.0878	.0579	.0000	
	10			0.0226	0.0530	0.0266		
	12			.0000	.0181	.0000		
	14				.0000			
	16							
	18							
20	20							
	22							
	24							

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 70 percent
Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4017	0.4734	0.5256	0.5448	0.5256	0.4734	0.4017
	22	.3700	.4426	.4957	.5151	.4957	.4426	.3700
	20	.3378	.4114	.4652	.4849	.4652	.4114	.3378
	18	.3052	.3797	.4342	.4541	.4342	.3797	.3052
	16	0.2723	0.3475	0.4026	0.4228	0.4026	0.3475	0.2723
	14	.2389	.3149	.3705	.3909	.3705	.3149	.2389
	12	.2054	.2820	.3380	.3585	.3380	.2820	.2054
	10	.1713	.2486	.3051	.3257	.3051	.2486	.1713
	8	0.1374	0.2150	0.2717	0.2926	0.2717	0.2150	0.1374
	6	.1033	.1811	.2381	.2589	.2381	.1811	.1033
	4	.0689	.1470	.2042	.2251	.2042	.1470	.0689
	2	.0344	.1127	.1700	.1909	.1700	.1127	.0344
	0	0.0000	0.0783	0.1356	0.1566	0.1356	0.0783	0.0000
Minus	2		0.0438	0.1011	0.1220	0.1011	0.0438	
	4		.0092	.0664	.0873	.0664	.0092	
	6		.0000	.0316	.0525	.0316	.0000	
	8			.0000	.0176	.0000		
	10				.0000			
	12							
	14							
	16							
	18							
	20							
	22							
	24							

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 80 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4049	0.4476	0.4786	0.4900	0.4786	0.4476	0.4049
	22	.3730	.4162	.4477	.4593	.4477	.4162	.3730
	20	.3405	.3843	.4163	.4280	.4163	.3843	.3405
	18	.3077	.3520	.3844	.3962	.3844	.3520	.3077
	16	0.2745	0.3192	0.3519	0.3639	0.3519	0.3192	0.2745
	14	.2408	.2860	.3191	.3312	.3191	.2860	.2408
	12	.2070	.2526	.2859	.2981	.2859	.2526	.2070
	10	.1729	.2188	.2523	.2646	.2523	.2188	.1729
	8	0.1385	0.1846	0.2184	0.2307	0.2184	0.1846	0.1385
	6	.1041	.1503	.1842	.1966	.1842	.1503	.1041
	4	.0695	.1159	.1499	.1623	.1499	.1159	.0695
	2	.0346	.0813	.1153	.1278	.1153	.0813	.0346
	0	0.0000	0.0465	0.0806	0.0931	0.0806	0.0465	0.0000
Minus	2		0.0118	0.0458	0.0583	0.0458	0.0118	
	4		.0000	.0110	.0234	.0110	.0000	
	6			.0000	.0000	.0000		
	8							
	10							
	12							
	14							
	16							
	18							
	20							
	22							
	24							

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 90 percent
Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4065	0.4227	0.4343	0.4386	0.4343	0.4227	0.4065
	22	.3744	.3907	.4026	.4069	.4026	.3907	.3744
	20	.3418	.3584	.3704	.3748	.3704	.3584	.3418
	18	.3088	.3256	.3378	.3422	.3378	.3256	.3088
	16	0.2755	0.2923	0.3047	0.3092	0.3047	0.2923	0.2755
	14	.2417	.2588	.2713	.2759	.2713	.2588	.2417
	12	.2078	.2250	.2375	.2421	.2375	.2250	.2078
	10	.1735	.1909	.2035	.2081	.2035	.1909	.1735
	8	0.1391	0.1565	0.1692	0.1739	0.1692	0.1565	0.1391
	6	.1045	.1219	.1347	.1394	.1347	.1219	.1045
	4	.0697	.0873	.1001	.1048	.1001	.0873	.0697
	2	.0348	.0524	.0653	.0700	.0653	.0524	.0348
	0	0.0000	0.0176	0.0304	0.0351	0.0304	0.0176	0.0000
Minus	2		0.0000	0.0000	0.0002	0.0000	0.0000	
	4				0.0000			
	6							
	8							
	10							
	12							
	14							
	16							
	18							
	20							
	22							
	24							

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 100 percent

Exp: North

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4067	0.3989	0.3929	0.3907	0.3929	0.3989	0.4067
	22	.3746	.3665	.3605	.3583	.3605	.3665	.3746
	20	.3420	.3338	.3278	.3256	.3278	.3338	.3420
	18	.3089	.3008	.2946	.2924	.2946	.3008	.3089
	16	0.2756	0.2672	0.2611	0.2588	0.2611	0.2672	0.2756
	14	.2418	.2334	.2272	.2249	.2272	.2334	.2418
	12	.2079	.1994	.1931	.1908	.1931	.1994	.2079
	10	.1736	.1651	.1587	.1564	.1587	.1651	.1736
	8	0.1391	0.1305	0.1242	0.1219	0.1242	0.1305	0.1391
	6	.1046	.0958	.0895	.0871	.0895	.0958	.1046
	4	.0698	.0611	.0547	.0523	.0547	.0611	.0698
	2	.0348	.0262	.0198	.0175	.0198	.0262	.0348
	0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Minus	2							
	4							
	6							
	8							
	10							
	12							
	14							
	16							
	18							
	20							
	22							
	24							

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 10 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)		Solar time (northeast exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3753	0.6593	0.8500	0.8962	0.7857	0.5480	0.2467
	22	.3517	.6399	.8335	.8804	.7682	.5269	.2212
	20	.3276	.6198	.8159	.8635	.7498	.5053	.1954
	18	.3032	.5989	.7974	.8455	.7305	.4830	.1694
	16	.2784	.5772	.7779	.8265	.7102	.4601	.1431
	14	.2532	.5549	.7574	.8066	.6891	.4366	.1167
	12	.2278	.5319	.7361	.7856	.6672	.4127	.0902
	10	.2021	.5082	.7138	.7637	.6445	.3882	.0635
	8	.1761	.4839	.6906	.7408	.6210	.3633	.0367
	6	.1499	.4591	.6667	.7170	.5967	.3379	.0100
	4	.1235	.4336	.6419	.6924	.5717	.3120	.0000
	2	.0970	.4077	.6163	.6669	.5460	.2859	
	0	.0704	.3812	.5900	.6406	.5196	.2594	.0000
Minus	2	.0436	.3543	.5629	.6135	.4926	.2325	.0000
	4	.0168	.3270	.5352	.5857	.4650	.2054	
	6	.0000	.2992	.5068	.5572	.4368	.1780	
	8		.2711	.4778	.5279	.4081	.1504	
	10		.2427	.4481	.4981	.3789	.1227	
	12		.2139	.4181	.4676	.3493	.0947	
	14		.1849	.3875	.4366	.3192	.0667	
	16		.1557	.3563	.4050	.2887	.0385	
	18		.1263	.3248	.3730	.2579	.0104	
	20		.0967	.2929	.3404	.2267	.0000	
	22		.0670	.2606	.3075	.1953		
	24		.0373	.2280	.2742	.1637		
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (northwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 20 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4528	0.7014	0.8494	0.8572	0.7227	0.4820	0.1994
22	.4289	.6812	.8315	.8394	.7029	.4585	.1717
20	.4045	.6603	.8125	.8205	.6822	.4345	.1439
18	.3796	.6385	.7926	.8007	.6607	.4100	.1158
16	0.3543	0.6159	0.7717	0.7799	0.6383	0.3850	0.0877
14	.3285	.5925	.7498	.7581	.6152	.3595	.0594
12	.3023	.5685	.7270	.7393	.5914	.3336	.0310
10	.2758	.5438	.7034	.7118	.5668	.3072	.0026
8	0.2489	0.5184	0.6789	0.6873	0.5415	0.2805	0.0000
6	.2217	.4923	.6535	.6620	.5156	.2535	
4	.1943	.4657	.6274	.6359	.4891	.2261	
2	.1665	.4385	.6005	.6090	.4619	.1985	
0	0.1387	0.4108	0.5729	0.5814	0.4342	0.1706	
Minus 2	0.1106	0.3826	0.5445	0.5531	0.4059	0.1425	
4	.0824	.3539	.5155	.5241	.3772	.1143	
6	.0541	.3248	.4859	.4944	.3480	.0859	
8	.0258	.2952	.4557	.4642	.3184	.0574	
10	0.0000	0.2654	0.4248	0.4334	0.2882	0.0288	
12		.2351	.3937	.4020	.2580	.0002	
14		.2047	.3619	.3702	.2273	.0000	
16		.1739	.3297	.3379	.1964		
18		0.1430	0.2971	0.3052	0.1652		
20		.1118	.2641	.2722	.1338		
22		.0806	.2308	.2387	.1022		
24		.0492	.1973	.2051	.0706		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 30 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5233	0.7356	0.8413	0.8120	0.6556	0.4141	0.1520
22	.4994	.7149	.8221	.7924	.6337	.3885	.1226
20	.4749	.6933	.8019	.7718	.6110	.3625	.0930
18	.4498	.6708	.7808	.7503	.5876	.3361	.0633
16	0.4241	0.6475	0.7587	0.7279	0.5634	0.3092	0.0335
14	.3980	.6235	.7357	.7046	.5385	.2820	.0037
12	.3713	.5987	.7118	.6805	.5131	.2544	.0000
10	.3443	.5731	.6870	.6555	.4869	.2265	
8	0.3167	0.5469	0.6614	0.6297	0.4602	0.1983	
6	.2889	.5200	.6350	.6031	.4329	.1699	
4	.2606	.4924	.6078	.5759	.4051	.1412	
2	.2320	.4643	.5799	.5479	.3768	.1125	
0	0.2032	0.4356	0.5513	0.5192	0.3481	0.0836	
Minus 2	0.1741	0.4063	0.5219	0.4899	0.3189	0.0546	
4	.1448	.3767	.4920	.4600	.2893	.0255	
6	.1153	.3464	.4614	.4295	.2594	.0000	
.8	.0857	.3158	.4303	.3986	.2291		
10	0.0560	0.2848	0.3985	0.3672	0.1984		
12	.0261	.2535	.3666	.3353	.1678		
14	.0000	.2218	.3340	.3030	.1369		
16		.1899	.3011	.2703	.1057		
18		0.1577	0.2677	0.2373	0.0745		
20		.1253	.2341	.2040	.0431		
22		.0929	.2001	.1704	.0117		
24		.0603	.1659	.1367	.0000		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 40 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5857	0.7620	0.8267	0.7625	0.5867	0.3465	0.1059
22	.5620	.7409	.8065	.7414	.5630	.3191	.0751
20	.5376	.7189	.7854	.7194	.5386	.2914	.0441
18	.5125	.6960	.7633	.6965	.5135	.2634	.0130
16	0.4868	0.6722	0.7403	0.6728	0.4878	0.2350	0.0000
14	.4605	.6476	.7164	.6482	.4615	.2063	
12	.4337	.6223	.6916	.6229	.4347	.1774	
10	.4063	.5962	.6659	.5968	.4073	.1483	
8	0.3784	0.5694	0.6395	0.5700	0.3794	0.1189	
6	.3501	.5419	.6123	.5425	.3511	.0895	
4	.3213	.5137	.5843	.5143	.3223	.0598	
2	.2921	.4849	.5556	.4855	.2932	.0303	
0	0.2626	0.4555	0.5263	0.4561	0.2637	0.0006	
Minus 2	0.2328	0.4255	0.4963	0.4261	0.2338	0.0000	
4	.2027	.3951	.4657	.3957	.2037		
6	.1723	.3641	.4345	.3647	.1733		
8	.1417	.3327	.4028	.3333	.1428		
10	0.1110	0.3009	0.3703	0.3015	0.1117		
12	.0801	.2687	.3380	.2693	.0811		
14	.0491	.2362	.2329	.2368	.0501		
16	.0181	.2034	.2715	.2040	.0191		
18	0.0000	0.1704	0.2378	0.1710	0.0000		
20		.1371	.2037	.1377			
22		.1038	.1694	.1043			
24		.0702	.1349	.0708			
Declination of sun (degrees)	1800	1600	1400	1200	1000	0600	0800
	Solar time (northwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 50 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6399	0.7812	0.8071	0.7109	0.5182	0.2808	0.0621
22	.6165	.7598	.7862	.6885	.4930	.2520	.0301
20	.5923	.7376	.7643	.6653	.4671	.2229	.0000
18	.5674	.7145	.7415	.6413	.4407	.1936	
16	0.5419	0.6904	0.7178	0.6165	0.4138	0.1639	
14	.5156	.6656	.6932	.5909	.3863	.1341	
12	.4888	.6400	.6677	.5647	.3584	.1042	
10	.4613	.6135	.6415	.5377	.3301	.0741	
8	0.4333	0.5863	0.6145	0.5101	0.3013	0.0439	
6	.4047	.5584	.5867	.4819	.2722	.0137	
4	.3757	.5299	.5582	.4531	.2427	.0000	
2	.3461	.5006	.5290	.4237	.2130		
0	0.3162	0.4708	0.4992	0.3938	0.1830		
Minus 2	0.2860	0.4404	0.4688	0.3635	0.1527		
4	.2552	.4095	.4378	.3327	.1223		
6	.2243	.3780	.4063	.3015	.0918		
8	.1931	.3461	.3742	.2699	.0611		
10	0.1615	0.3138	0.3414	0.2380	0.0299		
12	.1299	.2811	.3089	.2058	.0000		
14	.0981	.2480	.2756	.1734			
16	.0661	.2146	.2420	.1407			
18	0.0341	0.1810	0.2081	0.1079			
20	.0020	.1471	.1739	.0749			
22	.0000	.1132	.1395	.0419			
24		.0791	.1050	.0088			
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 60 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degreees)		Solar time (northeast exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.6940	0.7941	0.7841	0.6588	0.4517	0.2185	0.0293
	22	.6631	.7727	.7626	.6354	.4253	.1885	.0000
	20	.6393	.7504	.7401	.6112	.3983	.1583	
	18	.6147	.7272	.7168	.5863	.3708	.1279	
	16	0.5894	0.7030	0.6926	0.5607	0.3429	0.0973	
	14	.5633	.6781	.6675	.5344	.3145	.0667	
	12	.5367	.6523	.6416	.5075	.2858	.0360	
	10	.5093	.6257	.6150	.4799	.2567	.0052	
	8	0.4813	0.5984	0.5875	0.4518	0.2273	0.0000	
	6	.4526	.5703	.5594	.4230	.1976		
	4	.4236	.5415	.5306	.3938	.1677		
	2	.3939	.5121	.5012	.3641	.1376		
	0	0.3638	0.4821	0.4711	0.3340	0.1073		
Minus	2	0.3333	0.4514	0.4405	0.3034	0.0769		
	4	.3022	.4203	.4093	.2725	.0464		
	6	.2709	.3885	.3777	.2412	.0159		
	8	.2393	.3563	.3455	.2097	.0000		
	10	0.2073	0.3237	0.3125	0.1779			
	12	.1751	.2907	.2801	.1459			
	14	.1427	.2574	.2468	.1135			
	16	.1100	.2237	.2132	.0813			
	18	0.0773	0.1897	0.1794	0.0489			
	20	.0445	.1555	.1453	.0164			
	22	.0116	.1212	.1111	.0000			
	24	.0000	.0867	.0767				
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (northwest exposure)						

Table 8.--Sin β, latitude 46°--continued

Latitude: 46°
Slope: 70 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)		Solar time (northeast exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.7247	0.8019	0.7590	0.6077	0.3885	0.1603	0.0000
	22	.7023	.7805	.7370	.5835	.3610	.1293	
	20	.6789	.7583	.7142	.5586	.3331	.0983	
	18	.6548	.7351	.6905	.5330	.3048	.0671	
	16	0.6299	0.7110	0.6659	0.5067	0.2761	0.0358	
	14	.6041	.6860	.6405	.4799	.2471	.0045	
	12	.5777	.6603	.6144	.4524	.2178	.0000	
	10	.5490	.6337	.5875	.4244	.1882		
	8	0.5228	0.6063	0.5599	0.3960	0.1583		
	6	.4943	.5782	.5316	.3669	.1283		
	4	.4653	.5494	.5027	.3375	.0981		
	2	.4356	.5200	.4731	.3076	.0679		
	0	0.4055	0.4899	0.4430	0.2774	0.0375		
Minus	2	0.3749	0.4592	0.4123	0.2468	0.0071		
	4	.3437	.4280	.3811	.2160	.0000		
	6	.3122	.3961	.3495	.1848			
	8	.2803	.3639	.3175	.1535			
	10	0.2469	0.3312	0.2845	0.1219			
	12	.2155	.2981	.2522	.0903			
	14	.1828	.2646	.2191	.0585			
	16	.1497	.2308	.1857	.0266			
	18	0.1165	0.1967	0.1547	0.0000			
	20	.0831	.1623	.1184				
	22	.0497	.1279	.0845				
	24	.0162	.0933	.0504				
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (northwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 80 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7568	0.8055	0.7328	0.5585	0.3293	0.1065	0.0000
22	.7349	.7843	.7106	.5337	.3010	.0749	
20	.7122	.7621	.6875	.5082	.2724	.0432	
18	.6885	.7391	.6635	.4821	.2434	.0115	
16	0.6640	0.7151	0.6388	0.4554	0.2142	0.0000	
14	.6387	.6903	.6132	.4281	.1846		
12	.6127	.6647	.5870	.4004	.1549		
10	.5858	.6382	.5600	.3721	.1250		
8	0.5583	0.6109	0.5323	0.3434	0.0949		
6	.5301	.5830	.5040	.3143	.0647		
4	.5013	.5543	.4750	.2847	.0344		
2	.4717	.5249	.4455	.2549	.0041		
0	0.4417	0.4949	0.4155	0.2247	0.0000		
Minus 2	0.4112	0.4643	0.3849	0.1943			
4	.3800	.4332	.3539	.1636			
6	.3485	.4014	.3224	.1327			
8	.3166	.3692	.2905	.1016			
10	0.2842	0.3366	0.2578	0.0705			
12	.2515	.3035	.2258	.0392			
14	.2185	.2701	.1930	.0079			
16	.1852	.2363	.1600	.0000			
18	0.1517	0.2023	0.1264				
20	.1180	.1679	.0933				
22	.0842	.1335	.0598				
24	.0503	.0988	.0263				

Declination of sun (degrees)	Solar time (northwest exposure)						
	0600	0800	1000	1200	1400	1600	1800

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 90 percent
Exp: Northeast
Exp: Northwest

Declination of sun (degrees)		Solar time (northeast exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.7832	0.8059	0.7065	0.5120	0.2744	0.0574	0.0000
	22	.7620	.7849	.6841	.4866	.2455	.0252	
	20	.7398	.7630	.6608	.4607	.2163	.0000	
	18	.7166	.7402	.6367	.4342	.1869		
	16	0.6927	0.7163	0.6119	0.4072	0.1572		
	14	.6678	.6917	.5863	.3797	.1273		
	12	.6422	.6663	.5600	.3517	.0973		
	10	.6157	.6401	.5330	.3233	.0671		
	8	0.5886	0.6130	0.5053	0.2945	0.0369		
	6	.5607	.5852	.4771	.2653	.0067		
	4	.5321	.5567	.4483	.2359	.0000		
	2	.5028	.5275	.4189	.2061			
	0	0.4730	0.4977	0.3890	0.1761			
Minus	2	0.4427	0.4673	0.3586	0.1458			
	4	.4116	.4364	.3278	.1154			
	6	.3802	.4047	.2966	.0849			
	8	.3483	.3727	.2651	.0542			
	10	0.3159	0.3403	0.2326	0.0235			
	12	.2832	.3073	.2010	.0000			
	14	.2502	.2741	.1686				
	16	.2167	.2405	.1360				
	18	0.1831	0.2066	0.1032				
	20	.1493	.1723	.0703				
	22	.1152	.1381	.0373				
	24	.0810	.1035	.0043				
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (northwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 100 percent

Exp: Northeast
Exp: Northwest

Declination of sun (degrees)	Solar time (northeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.8049	0.8040	0.6806	0.4683	0.2239	0.0128	0.0000
22	.7843	.7831	.6581	.4426	.1945	.0000	
20	.7626	.7615	.6347	.4164	.1649		
18	.7400	.7389	.6106	.3896	.1351		
16	0.7166	0.7154	0.5858	0.3624	0.1051		
14	.6922	.6911	.5602	.3347	.0750		
12	.6671	.6659	.5339	.3066	.0449		
10	.6411	.6399	.5070	.2782	.0146		
8	0.6143	0.6131	0.4795	0.2494	0.0000		
6	.5868	.5855	.4514	.2203			
4	.5585	.5573	.4227	.1909			
2	.5295	.5284	.3936	.1613			
0	0.5000	0.4988	0.3639	0.1315			
Minus 2	0.4699	0.4686	0.3338	0.1016			
4	.4391	.4380	.3033	.0715			
6	.4077	.4066	.2724	.0413			
8	.3760	.3748	.2413	.0111			
10	0.3437	0.3426	0.2091	0.0000			
12	.3111	.3099	.1780				
14	.2781	.2769	.1460				
16	.2447	.2435	.1139				
18	0.2110	0.2099	0.0816				
20	.1771	.1758	.0492				
22	.1429	.1418	.0167				
24	.1086	.1075	.0000				
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (northwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 10 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.3820	0.6856	0.8834	0.9226	0.7925	0.5281	0.2002
22	.3604	.6685	.8693	.9090	.7770	.5087	.1759
20	.3383	.6506	.8541	.8943	.7606	.4886	.1513
18	.3158	.6318	.8378	.8786	.7432	.4679	.1266
16	0.2929	0.6123	0.8205	0.8617	0.7249	0.4467	0.1017
14	.2697	.5921	.8023	.8438	.7057	.4249	.0766
12	.2461	.5712	.7830	.8249	.6857	.4026	.0515
10	.2223	.5495	.7628	.8050	.6648	.3798	.0263
8	0.1981	0.5272	0.7417	0.7841	0.6431	0.3565	0.0011
6	.1738	.5042	.7196	.7622	.6207	.3328	.0000
4	.1492	.4807	.6967	.7395	.5975	.3087	
2	.1244	.4565	.6729	.7158	.5735	.2843	
0	0.0995	0.4318	0.6484	0.6912	0.5489	0.2594	
Minus 2	0.0745	0.4065	0.6230	0.6658	0.5235	0.2343	
4	.0493	.3808	.5969	.6396	.4976	.2089	
6	.0241	.3546	.5700	.6126	.4710	.1832	
8	.0000	.3280	.5424	.5849	.4439	.1573	
10		0.3009	0.5142	0.5564	0.4162	0.1312	
12		.2735	.4854	.5273	.3881	.1050	
14		.2458	.4559	.4975	.3594	.0786	
16		.2177	.4259	.4671	.3303	.0521	
18		0.1895	0.3954	0.4362	0.3008	0.0255	
20		.1609	.3645	.4047	.2709	.0000	
22		.1322	.3330	.3727	.2408		
24		.1033	.3012	.3403	.2103		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 20 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4661	0.7532	0.9154	0.9092	0.7362	0.4429	0.1077
22	.4461	.7375	.9021	.8958	.7203	.4225	.0824
20	.4255	.7209	.8877	.8813	.7034	.4017	.0570
18	.4045	.7034	.8723	.8658	.6858	.3804	.0315
16	0.3830	0.6851	0.8557	0.8492	0.6672	0.3585	0.0059
14	.3609	.6659	.8382	.8316	.6479	.3363	.0000
12	.3385	.6459	.8196	.8129	.6278	.3137	
10	.3156	.6252	.8000	.7933	.6069	.2906	
8	0.2924	0.6036	0.7795	0.7727	0.5852	0.2673	
6	.2688	.5814	.7579	.7512	.5629	.2435	
4	.2449	.5584	.7355	.7287	.5399	.2195	
2	.2206	.5347	.7122	.7054	.5162	.1955	
0	0.1961	0.5104	0.6880	0.6812	0.4919	0.1707	
Minus 2	0.1714	0.4855	0.6629	0.6561	0.4669	0.1460	
4	.1464	.4600	.6371	.6303	.4415	.1211	
6	.1213	.4339	.6105	.6037	.4154	.0961	
8	.0961	.4073	.5831	.5764	.3889	.0709	
10	0.0707	0 3801	0.5550	0.5483	0.3619	0.0457	
12	.0452	.3526	.5263	.5196	.3345	.0204	
14	.0197	.3246	.4969	.4903	.3066	.0000	
16	.0000	.2962	.4669	.4603	.2784		
18		0.2675	0.4363	0.4299	0.2498		
20		.2384	.4052	.3988	.2209		
22		.2090	.3736	.3673	.1918		
24		.1794	.3416	.3354	.1624		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 30 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5427	0.8115	0.9379	0.8881	0.6754	0.3568	0.0177
22	.5245	.7973	.9256	.8750	.6592	.3358	.0000
20	.5057	.7821	.9121	.8609	.6421	.3144	
18	.4862	.7660	.8976	.8457	.6243	.2926	
16	0.4661	0.7489	0.8819	0.8295	0.6057	0.2705	
14	.4455	.7309	.8652	.8123	.5864	.2480	
12	.4243	.7121	.8474	.7941	.5663	.2253	
10	.4026	.6923	.8286	.7749	.5456	.2022	
8	0.3805	0.6718	0.8088	0.7548	0.5242	0.1789	
6	.3578	.6504	.7880	.7337	.5022	.1554	
4	.3347	.6282	.7662	.7118	.4796	.1317	
2	.3112	.6052	.7435	.6890	.4563	.1078	
0	0.2874	0.5815	0.7199	0.6654	0.4325	0.0838	
Minus 2	0.2631	0.5571	0.6954	0.6409	0.4082	0.0597	
4	.2386	.5321	.6701	.6157	.3834	.0356	
6	.2138	.5063	.6439	.5897	.3582	.0113	
8	.1887	.4800	.6170	.5630	.3325	.0000	
10	0.1633	0.4530	0.5893	0.5356	0.3063		
12	.1378	.4256	.5609	.5076	.2798		
14	.1121	.3976	.5318	.4789	.2530		
16	.0863	.3691	.5021	.4497	.2259		
18	0.0604	0.3402	0.4718	0.4199	0.1985		
20	.0344	.3108	.4408	.3896	.1708		
22	.0083	.2811	.4094	.3588	.1429		
24	.0000	.2510	.3774	.3276	.1149		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 40 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6109	0.8601	0.9516	0.8609	0.6123	0.2724	0.0000
22	.5945	.8474	.9403	.8482	.5959	.2510	
20	.5774	.8337	.9278	.8345	.5788	.2293	
18	.5596	.8190	.9142	.8198	.5610	.2072	
16	0.5411	0.8033	0.8995	0.8041	0.5425	0.1849	
14	.5219	.7866	.8837	.7874	.5234	.1624	
12	.5021	.7689	.8669	.7697	.5036	.1397	
10	.4817	.7503	.8489	.7512	.4832	.1168	
8	0.4607	0.7308	0.8300	0.7317	0.4622	0.0938	
6	.4392	.7104	.8100	.7113	.4406	.0707	
4	.4171	.6891	.7890	.6900	.4186	.0474	
2	.3945	.6670	.7671	.6679	.3959	.0242	
0	0.3714	0.6441	0.7443	0.6450	0.3729	0.0009	
Minus 2	0.3479	0.6204	0.7205	0.6213	0.3493	0.0000	
4	.3239	.5960	.6959	.5968	.3254		
6	.2995	.5708	.6704	.5716	.3010		
8	.2748	.5449	.6441	.5457	.2763		
10	0.2498	0.5183	0.6170	0.5192	0.2512		
12	.2244	.4912	.5891	.4920	.2259		
14	.1988	.4634	.5606	.4643	.2002		
16	.1729	.4351	.5313	.4359	.1743		
18	0.1468	0.4062	0.5015	0.4070	0.1482		
20	.1206	.3769	.4709	.3777	.1219		
22	.0941	.3470	.4399	.3478	.0955		
24	.0676	.3168	.4083	.3176	.0690		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 50 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6702	0.8993	0.9597	0.8293	0.5490	0.1917	0.0000
22	.6557	.8882	.9473	.8171	.5326	.1700	
20	.6403	.8759	.9358	.8039	.5156	.1481	
18	.6241	.8626	.9232	.7897	.4979	.1259	
16	0.6072	0.8483	0.9095	0.7746	0.4796	0.1037	
14	.5896	.8329	.8947	.7585	.4608	.0813	
12	.5712	.8165	.8788	.7415	.4414	.0588	
10	.5521	.7991	.8619	.7236	.4214	.0363	
8	0.5324	0.7785	0.8438	0.7048	0.4010	0.0518	
6	.5120	.7614	.8248	.6852	.3800	.0000	
4	.4910	.7411	.8047	.6647	.3586		
2	.4694	.7200	.7837	.6434	.3367		
0	0.4472	0.6980	0.7617	0.6213	0.3145		
Minus 2	0.4245	0.6751	0.7388	0.5985	0.2918		
4	.4012	.6514	.7149	.5749	.2688		
6	.3775	.6269	.6903	.5507	.2455		
8	.3533	.6016	.6647	.5257	.2219		
10	0.3287	0.5755	0.6384	0.5002	0.1980		
12	.3037	.5489	.6113	.4740	.1738		
14	.2783	.5216	.5834	.4472	.1495		
16	.2525	.4936	.5548	.4199	.1249		
18	0.2265	0.4650	0.5256	0.3921	0.1003		
20	.2002	.4358	.4957	.3638	.0755		
22	.1736	.4061	.4652	.3351	.0506		
24	.1469	.3759	.4342	.3059	.0256		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 60 percent

Exp: East

Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7289	0.9300	0.9572	0.7951	0.4871	0.1159	0.0000
22	.7081	.9203	.9479	.7833	.4709	.0941	
20	.6944	.9095	.9374	.7707	.4540	.0721	
18	.6799	.8976	.9259	.7571	.4366	.0501	
16	0.6646	0.8846	0.9132	0.7426	0.4186	0.0280	
14	.6484	.8705	.8994	.7272	.4001	.0059	
12	.6315	.8554	.8845	.7109	.3812	.0000	
10	.6138	.8392	.8685	.6937	.3618		
8	0.5953	0.8220	0.8514	0.6757	0.3419		
6	.5761	.8038	.8333	.6569	.3217		
4	.5563	.7846	.8142	.6372	.3010		
2	.5357	.7645	.7942	.6168	.2800		
0	0.5145	0.7434	0.7731	0.5957	0.2586		
Minus 2	0.4927	0.7214	0.7511	0.5738	0.2369		
4	.4702	.6985	.7282	.5512	.2150		
6	.4472	.6749	.7044	.5279	.1927		
8	.4237	.6503	.6797	.5040	.1703		
10	0.3996	0.6249	0.6543	0.4795	0.1476		
12	.3750	.5989	.6280	.4544	.1247		
14	.3500	.5721	.6009	.4287	.1017		
16	.3245	.5446	.5731	.4026	.0786		
18	0.2987	0.5164	0.5447	0.3759	0.0554		
20	.2725	.4876	.5155	.3488	.0321		
22	.2460	.4582	.4857	.3212	.0087		
24	.2191	.4283	.4554	.2933	.0000		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 70 percent

Exp: East
Exp: West

Declination of sun (degrees)		Solar time (east exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.7636	0.9533	0.9519	0.7596	0.4280	0.0459	0.0000
	22	.7525	.9451	.9436	.7484	.4119	.0241	
	20	.7404	.9356	.9341	.7363	.3952	.0023	
	18	.7275	.9251	.9235	.7233	.3781	.0000	
	16	0.7137	0.9133	0.9118	0.7095	0.3606		
	14	.6990	.9005	.8990	.6947	.3425		
	12	.6834	.8866	.8851	.6792	.3241		
	10	.6651	.8716	.8701	.6628	.3053		
	8	0.6499	0.8556	0.8540	0.6457	0.2861		
	6	.6319	.8385	.8369	.6276	.2666		
	4	.6132	.8204	.8188	.6088	.2467		
	2	.5937	.8013	.7997	.5893	.2265		
	0	0.5735	0.7812	0.7796	0.5691	0.2061		
Minus	2	0.5525	0.7601	0.7585	0.5482	0.1854		
	4	.5309	.7382	.7366	.5266	.1645		
	6	.5087	.7153	.7137	.5044	.1434		
	8	.4859	.6916	.6900	.4815	.1221		
	10	0.4605	0.6668	0.6654	0.4581	0.1007		
	12	.4384	.6416	.6400	.4341	.0791		
	14	.4139	.6154	.6139	.4096	.0574		
	16	.3888	.5885	.5869	.3846	.0357		
	18	0.3633	0.5608	0.5542	0.3591	0.0190		
	20	.3373	.5325	.5310	.3332	.0000		
	22	.3109	.5035	.5021	.3069			
	24	.2842	.4740	.4725	.2802			
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (west exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 80 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.7991	0.9704	0.9430	0.7240	0.3723	0.0000	0.0000
22	.7896	.9635	.9356	.7134	.3564	.	
20	.7791	.9553	.9271	.7019	.3401		
18	.7677	.9460	.9174	.6895	.3233		
16	0.7553	0.9356	0.9066	0.6763	0.3062		
14	.7420	.9240	.8948	.6622	.2886		
12	.7278	.9113	.8818	.6474	.2708		
10	.7127	.8974	.8678	.6317	.2526		
8	0.6968	0.8825	0.8527	0.6153	0.2341		
6	.6800	.8665	.8365	.5982	.2153		
4	.6623	.8494	.8194	.5803	.1962		
2	.6439	.8313	.8012	.5617	.1769		
0	0.6247	0.8122	0.7821	0.5424	0.1574		
Minus 2	0.6047	0.7921	0.7620	0.5225	0.1377		
4	.5840	.7710	.7410	.5019	.1179		
6	.5625	.7491	.7191	.4807	.0979		
8	.5404	.7261	.6963	.4590	.0777		
10	0.5177	0.7022	0.6727	0.4367	0.0575		
12	.4943	.6777	.6483	.4138	.0372		
14	.4703	.6522	.6230	.3904	.0169		
16	.4457	.6259	.5971	.3666	.0000		
18	0.4205	0.5989	0.5703	0.3423			
20	.3949	.5711	.5428	.3176			
22	.3688	.5427	.5147	.2925			
24	.3422	.5135	.4860	.2671			
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0900
	Solar time (west exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 90 percent

Exp: East
Exp: West

Declination of sun (degrees)	Solar time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.8286	0.9826	0.9315	0.6892	0.3204	0.0000	0.0000
22	.8205	.9768	.9250	.6790	.3048		
20	.8115	.9699	.9174	.6681	.2887		
18	.8015	.9617	.9086	.6563	.2724		
16	0.7904	0.9524	0.8987	0.6437	0.2557		
14	.7784	.9420	.8878	.6303	.2387		
12	.7655	.9304	.8957	.6162	.2214		
10	.7516	.9176	.8626	.6013	.2038		
8	0.7369	0.9038	0.8485	0.5857	0.1860		
6	.7212	.8888	.8333	.5694	.1679		
4	.7046	.8728	.8170	.5524	.1497		
2	.6872	.8557	.7998	.5347	.1313		
0	0.6690	0.8375	0.7816	0.5163	0.1127		
Minus 2	0.6499	0.8183	0.7625	0.4974	0.0939		
4	.6300	.7982	.7424	.4778	.0751		
6	.6094	.7770	.7215	.4576	.0562		
8	.5880	.7549	.6996	.4369	.0372		
10	0.5660	0.7318	0.6769	0.4157	0.0181		
12	.5432	.7080	.6534	.3939	.0000		
14	.5197	.6833	.6291	.3717			
16	.4957	.6577	.6040	.3489			
18	0.4710	0.6313	0.5782	0.3258			
20	.4457	.6041	.5516	.3023			
22	.4200	.5762	.5244	.2784			
24	.3937	.5476	.4966	.2542			
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 8.--Sin θ, latitude 46°- continued

Latitude: 46°
Slope: 100 percent

Exp: East
Exp: West

Declination of sun (degrees)	Slope time (east exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.8529	0.9907	0.9185	0.6556	0.2725	0.0000	0.0000
22	.8461	.9861	.9128	.6460	.2571		
20	.8384	.9802	.9059	.6355	.2415		
18	.8297	.9731	.8980	.6243	.2255		
16	0.8199	0.9649	0.8890	0.6124	0.2093		
14	.8092	.9555	.8789	.5997	.1927		
12	.7974	.9450	.8677	.5862	.1760		
10	.7847	.9333	.8555	.5721	.1591		
8	0.7710	0.9204	0.8422	0.5572	0.1419		
6	.7664	.9064	.8279	.5417	.1246		
4	.7409	.8914	.8125	.5255	.1071		
2	.7244	.8752	.7962	.5087	.0895		
0	0.7071	0.8580	0.7790	0.4912	0.0718		
Minus 2	0.6889	0.8397	0.7607	0.4732	0.0541		
4	.6699	.8204	.7416	.4545	.0362		
6	.6501	.8001	.7215	.4353	.0183		
8	.6294	.7788	.7006	.4156	.0003		
10	0.6080	0.7564	0.6788	0.3954	0.0000		
12	.5859	.7335	.6562	.3747			
14	.5631	.7095	.6328	.3536			
16	.5395	.6845	.6086	.3320			
18	0.5153	0.6588	0.5837	0.3100			
20	.4905	.6323	.5580	.2876			
22	.4651	.6050	.5317	.2649			
24	.4391	.5769	.5047	.2419			
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (west exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 10 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)		Solar time (southeast exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3355	0.6657	0.8903	0.9489	0.8260	0.5544	0.2070
	22	.3151	.6502	.8781	.9376	.8129	.5372	.1846
	20	.2942	.6339	.8648	.9252	.7987	.5194	.1620
	18	.2730	.6168	.8505	.9116	.7836	.5009	.1392
	16	0.2515	0.5989	0.8352	0.8969	0.7675	0.4818	0.1162
	14	.2296	.5803	.8188	.8811	.7506	.4621	.0931
	12	.2075	.5611	.8015	.8643	.7327	.4419	.0698
	10	.1851	.5411	.7831	.8464	.7138	.4211	.0465
	8	0.1625	0.5205	0.7638	0.8274	0.6942	0.3998	0.0367
	6	.1397	.4992	.7436	.8075	.6737	.3780	.0000
	4	.1167	.4773	.7225	.7865	.6523	.3557	
	2	.0936	.4549	.7005	.7647	.6302	.3331	
	0	0.0704	0.4319	0.6776	0.7418	0.6073	0.3100	
Minus	2	0.0470	0.4083	0.6539	0.7181	0.5836	0.2865	
	4	.0237	.3843	.6294	.6935	.5593	.2627	
	6	.0003	.3598	.6042	.6681	.5342	.2386	
	8	.0000	.3348	.5782	.6418	.5085	.2141	
	10		0.3095	0.5516	0.6148	0.4823	0.1895	
	12		.2837	.5241	.5869	.4553	.1645	
	14		.2577	.4962	.5585	.4279	.1394	
	16		.2313	.4675	.5293	.3999	.1141	
	18		0.2046	0.4384	0.4994	0.3715	0.0887	
	20		.1777	.4087	.4690	.3425	.0632	
	22		.1506	.3785	.4380	.3132	.0376	
	24		.1233	.3478	.4064	.2835	.0119	
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (southwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 20 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)		Solar time (southeast exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3744	0.7141	0.9289	0.9611	0.8022	0.4947	0.1210
	22	.3567	.7015	.9195	.9522	.7909	.4788	.0996
	20	.3386	.6881	.9090	.9421	.7787	.4623	.0780
	18	.3201	.6738	.8974	.9309	.7655	.4453	.0563
	16	0.3012	0.6586	0.8846	0.9185	0.7513	0.4278	0.0346
	14	.2819	.6427	.8708	.9051	.7363	.4097	.0128
	12	.2623	.6260	.8560	.8905	.7203	.3911	.0000
	10	.2423	.6086	.8401	.8748	.7035	.3720	
	8	0.2221	0.5903	0.8231	0.8581	0.6858	0.3525	
	6	.2016	.5714	.8052	.8403	.7673	.3325	
	4	.1808	.5519	.7863	.8215	.6480	.3122	
	2	.1599	.5315	.7665	.8017	.6279	.2915	
	0	0.1387	0.5106	0.7457	0.7809	0.6070	0.2704	
Minus	2	0.1173	0.4890	0.7239	0.7592	0.5853	0.2489	
	4	.0959	.4668	.7013	.7365	.5630	.2272	
	6	.0743	.4441	.6779	.7130	.5400	.2052	
	8	.0526	.4208	.6536	.7886	.5163	.1830	
	10	0.0308	0.3971	0.6287	0.6633	0.4922	0.1605	
	12	.0090	.3728	.6027	.6372	.4671	.1378	
	14	.0000	.3481	.5762	.6104	.4416	.1150	
	16		.3229	.5489	.5828	.4156	.0920	
	18		0.2974	0.5210	0.5545	0.3891	0.0689	
	20		.2714	.4924	.5255	.3621	.0458	
	22		.2452	.4632	.4959	.3346	.0225	
	24		.2187	.4335	.4657	.3068	.0000	
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (southwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 30 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4085	0.7542	0.9577	0.9642	0.7721	0.4327	0.0372
22	.3936	.7446	.9511	.9577	.7627	.4183	.0168
20	.3783	.7340	.9433	.9500	.7523	.4033	.0000
18	.3625	.7225	.9343	.9411	.7411	.3878	
16	0.3463	0.7102	0.9243	0.9311	0.7289	0.3719	
14	.3297	.6970	.9131	.9200	.7159	.3555	
12	.3126	.6829	.9007	.9077	.7020	.3387	
10	.2952	.6680	.8873	.8943	.6872	.3214	
8	0.2775	0.6523	0.8728	0.8799	0.6716	0.3038	
6	.2593	.6358	.8573	.8643	.6552	.2858	
4	.2409	.6186	.8407	.8478	.6380	.2674	
2	.2222	.6005	.8230	.8302	.6200	.2488	
0	0.2032	0.5817	0.8044	0.8115	0.6012	0.2298	
Minus 2	0.1839	0.5623	0.7848	0.7919	0.5817	0.2105	
4	.1645	.5421	.7642	.7713	.5615	.1910	
6	.1448	.5213	.7427	.7498	.5407	.1713	
8	.1250	.4998	.7203	.7274	.5191	.1513	
10	0.1050	0.4778	0.6973	0.7041	0.4972	0.1312	
12	.0849	.4551	.6729	.6799	.4742	.1109	
14	.0646	.4319	.6480	.6549	.4508	.0904	
16	.0443	.4082	.6222	.6291	.4269	.0699	
18	0.0239	0.3839	0.5957	0.6025	0.4025	0.0492	
20	.0036	.3592	.5685	.5752	.3776	.0286	
22	.0000	.3341	.5406	.5472	.3522	.0078	
24		.3086	.5120	.5185	.3264	.0000	
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 40 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4374	0.7861	0.9771	0.9593	0.7372	0.3705	0.0000
22	.4253	.7793	.9732	.9550	.7297	.3576	
20	.4128	.7715	.9680	.9496	.7213	.3441	
18	.3998	.7628	.9617	.9431	.7120	.3302	
16	0.3863	0.7532	0.9542	0.9354	0.7018	0.3160	
14	.3723	.7427	.9456	.9266	.6908	.3013	
12	.3578	.7312	.9358	.9166	.6789	.2863	
10	.3429	.7189	.9248	.9055	.6662	.2709	
8	0.3276	0.7057	0.9127	0.8933	0.6527	0.2552	
6	.3119	.6916	.8995	.8801	.6384	.2392	
4	.2958	.6768	.8853	.8657	.6233	.2229	
2	.2794	.6609	.8699	.8503	.6074	.2063	
0	0.2626	0.6444	0.8535	0.8339	0.5909	0.1895	
Minus 2	0.2455	0.6270	0.8360	0.8164	0.5736	0.1725	
4	.2281	.6089	.8175	.7979	.5556	.1551	
6	.2105	.5901	.7981	.7786	.5369	.1377	
8	.1925	5705	.7776	.7582	.5175	.1201	
10	0.1743	0.5503	0.7565	0.7369	0.4979	0.1023	
12	.1560	.5293	.7339	.7147	.4770	.0844	
14	.1374	.5078	.7107	.6917	.4559	.0664	
16	.1186	.4856	.6866	.6678	.4341	.0483	
18	0.0997	0.4628	0.6617	0.6431	0.4119	0.0302	
20	.0807	.4394	.6360	.6176	.3892	.0121	
22	.0616	.4156	.6095	.5913	.3660	.0000	
24	.0425	.3912	.5822	.5643	.3423		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 50 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)		Solar time (southeast exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4612	0.8102	0.9883	0.9478	0.6994	0.3098	0.0000
	22	.4519	.8061	.9869	.9457	.6937	.2983	
	20	.4421	.8011	.9843	.9425	.6871	.2864	
	18	.4317	.7950	.9804	.9382	.6797	.2741	
	16	0.4208	0.7880	0.9754	0.9327	0.6714	0.2615	
	14	.4094	.7800	.9692	.9261	.6623	.2486	
	12	.3974	.7711	.9618	.9183	.6525	.2353	
	10	.3850	.7612	.9532	.9095	.6418	.2218	
	8	0.3721	0.7504	0.9435	0.8995	0.6303	0.2081	
	6	.3588	.7387	.9326	.8884	.6181	.1940	
	4	.3450	.7263	.9206	.8763	.6051	.1797	
	2	.3309	.7126	.9075	.8631	.5914	.1652	
	0	0.3162	0.6983	0.8932	0.8488	0.5770	0.1505	
Minus	2	0.3012	0.6830	0.8779	0.8335	0.5618	0.1357	
	4	.2859	.6670	.8615	.8172	.5460	.1205	
	6	.2702	.6501	.8440	.7998	.5295	.1054	
	8	.2542	.6325	.8255	.7816	.5124	.0901	
	10	0.2379	0.6141	0.8064	0.7623	0.4950	0.0747	
	12	.2212	.5949	.7856	.7422	.4763	.0591	
	14	.2043	.5750	.7642	.7211	.4573	.0435	
	16	.1872	.5544	.7418	.6991	.4378	.0279	
	18	0.1698	0.5331	0.7185	0.6763	0.4178	0.0122	
	20	.1522	.5112	.6944	.6527	.3972	.0000	
	22	.1344	.4887	.6694	.6283	.3762		
	24	.1165	.4655	.6436	.6031	.3547		
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (southwest exposure)						

Table 8.--Sin θ latitude 46°--continued

Latitude: 46°
Slope: 60 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.4885	0.8275	0.9926	0.9318	0.6602	0.2518	0.0000
22	.4737	.8260	.9935	.9313	.6562	.2417	
20	.4664	.8234	.9932	.9302	.6513	.2313	
18	.4585	.8198	.9917	.9279	.6457	.2205	
16	0.4501	0.8153	0.9889	0.9245	0.6392	0.2096	
14	.4411	.8097	.9850	.9200	.6320	.1983	
12	.4315	.8032	.9799	.9143	.6241	.1868	
10	.4221	.7957	.9736	.9076	.6153	.1751	
8	0.4109	0.7872	0.9661	0.8997	0.6058	0.1632	
6	.3998	.7777	.9574	.8907	.5956	.1511	
4	.3883	.7675	.9475	.8807	.5846	.1387	
2	.3763	.7560	.9365	.8695	.5730	.1262	
0	0.3638	0.7437	0.9244	0.8573	0.5606	0.1136	
Minus 2	0.3508	0.7306	0.9111	0.8441	0.5475	0.1008	
4	.3375	.7165	.8967	.8299	.5338	.0878	
6	.3238	.7016	.8813	.8146	.5195	.0749	
8	.3096	.6858	.8647	.7983	.5045	.0618	
10	0.2951	0.6692	0.8476	0.7811	0.4893	0.0487	
12	.2802	.6518	.8252	.7629	.4726	.0354	
14	.2649	.6336	.8089	.7438	.4559	.0221	
16	.2493	.6146	.7882	.7238	.4385	.0089	
18	0.2335	0.5948	0.7666	0.7029	0.4207	0.0000	
20	.2173	.5743	.7441	.6811	.4023		
22	.2009	.5532	.7207	.6585	.3834		
24	.1842	.5313	.6964	.6351	.3640		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 70 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)		Solar time (southeast exposure)						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4956	0.8390	0.9913	0.9115	0.6209	0.1974	0.0000
	22	.4912	.8399	.9944	.9133	.6184	.1887	
	20	.4863	.8396	.9962	.9141	.6152	.1796	
	18	.4807	.8383	.9969	.9137	.6112	.1703	
	16	0.4746	0.8361	0.9963	0.9122	0.6065	0.1609	
	14	.4679	.8327	.9945	.9096	.6010	.1513	
	12	.4606	.8284	.9915	.9059	.5948	.1414	
	10	.4515	.8231	.9872	.9011	.5879	.1314	
	8	0.4444	0.8168	0.9818	0.8953	0.5802	0.1213	
	6	.4354	.8094	.9752	.8882	.5719	.1109	
	4	.4260	.8013	.9673	.8801	.5628	.1005	
	2	.4161	.7918	.9584	.8710	.5531	.0899	
	0	0.4055	0.7816	0.9482	0.8608	0.5427	0.0792	
Minus	2	0.3945	0.7703	0.9369	0.8495	0.5316	0.0684	
	4	.3831	.7582	.9244	.8372	.5199	.0575	
	6	.3711	.7451	.9109	.8239	.5076	.0466	
	8	.3587	.7311	.8962	.8096	.4946	.0356	
	10	0.3444	0.7163	0.8809	0.7943	0.4815	0.0246	
	12	.3327	.7005	.8635	.7780	.4669	.0135	
	14	.3190	.6839	.8456	.7608	.4522	.0025	
	16	.3050	.6665	.8267	.7426	.4369	.0000	
	18	0.2906	0.6482	0.7971	0.7236	0.4186	0.0000	
	20	.2758	.6291	.7858	.7036	.4047		
	22	.2607	.6094	.7639	.6827	.3879		
	24	.2453	.5889	.7411	.6612	.3707		
Declination of sun (degrees)		1800	1600	1400	1200	1000	0800	0600
		Solar time (southwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 80 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	12000	1400	1600	1800
Plus 24	0.5072	0.8459	0.9860	0.8895	0.5824	0.1470	0.0000
22	.5050	.8489	.9909	.8930	.5814	.1395	
20	.5023	.8508	.9947	.8955	.5796	.1318	
18	.4989	.8516	.9973	.8968	.5772	.1239	
16	0.4949	0.8514	0.9986	0.8971	0.5740	0.1160	
14	.4903	.8501	.9988	.8963	.5702	.1078	
12	.4851	.8479	.9977	.8944	.5656	.0995	
10	.4793	.8445	.9954	.8914	.5604	.0911	
8	0.4729	0.8402	0.7919	0.8873	0.5545	0.0826	
6	.4659	.8348	.9872	.8821	.5479	.0739	
4	.4584	.8286	.9812	.8759	.5406	.0652	
2	.4504	.8210	.9741	.8686	.5327	.0564	
0	0.4417	0.8126	0.9658	0.8602	0.5241	0.0475	
Minus 2	0.4325	0.8032	0.9563	0.8508	0.5149	0.0386	
4	.4229	.7929	.9457	.8403	.5050	.0295	
6	.4127	.7816	.9339	.8288	.4946	.0207	
8	.4020	.7693	.9209	.8163	.4835	.0116	
10	0.3908	0.7560	0.9074	0.8029	0.4724	0.0026	
12	.3791	.7419	.8917	.7884	.4596	.0000	
14	.3669	.7268	.8755	.7730	.4469		
16	.3544	.7109	.8582	.7566	.4336		
18	0.3413	0.6941	0.8398	0.7393	.4197		
20	.3279	.6763	.8204	.7211	.4053		
22	.3141	.6580	.8000	.7021	.3905		
24	.2999	.6387	.7787	.6822	.3751		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 90 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5160	0.8492	0.9776	0.8664	0.5453	0.1007	0.0000
22	.5158	.8541	.9843	.8714	.5457	.0945	
20	.5150	.8679	.9898	.8754	.5453	.0880	
18	.5136	.8606	.9941	.8784	.5443	.0813	
16	0.5115	0.8623	0.9973	0.8802	0.5425	0.0747	
14	.5089	.8629	.9991	.8810	.5402	.0679	
12	.5055	.8625	.9998	.8807	.5371	.0611	
10	.5016	.8610	.9993	.8794	.5334	.0541	
8	0.4971	0.8585	0.9975	0.8769	0.5291	0.0472	
6	.4919	.8549	.9945	.8735	.5241	.0401	
4	.4862	.8505	.9903	.8689	.5185	.0330	
2	.4800	.8446	.9849	.8633	.5122	.0258	
0	0.4730	0.8379	0.9784	0.8566	0.5053	0.0186	
Minus 2	0.4655	0.8302	0.9706	0.8489	0.4978	0.0114	
4	.4575	.8215	.9616	.8401	.4897	.0041	
6	.4489	.8118	.9515	.8304	.4810	.0000	
8	.4397	.8011	.9401	.8196	.4717		
10	0.4301	0.7895	0.9283	0.8078	0.4624		
12	.4199	.7768	.9141	.7950	.4514		
14	.4091	.7632	.8994	.7813	.4405		
16	.3979	.7487	.8836	.7666	.4289		
18	0.3862	0.7333	0.8668	0.7510	0.4169		
20	.3740	.7168	.8489	.7345	.4044		
22	.3614	.6997	.8299	.7170	.3913		
24	.3483	.6817	.8100	.6987	.3778		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 100 percent

Exp: Southeast
Exp: Southwest

Declination of sun (degrees)	Solar time (southeast exposure)						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.5224	0.8497	0.9672	0.8429	0.5104	0.0586	0.0000
22	.5240	.8563	.9755	.8493	.5119	.0534	
20	.5250	.8616	.9825	.8547	.5127	.0480	
18	.5254	.8662	.9884	.8591	.5129	.0426	
16	0.5251	0.8697	0.9931	0.8624	0.5125	0.0372	
14	.5242	.8720	.9966	.8646	.5114	.0317	
12	.5226	.8732	.9989	.8658	.5098	.0261	
10	.5204	.8734	.9999	.8660	.5075	.0205	
8	0.5176	0.8726	0.9997	0.8650	0.5046	0.0149	
6	.5141	.8706	.9983	.8631	.5011	.0093	
4	.5100	.8678	.9957	.8601	.4669	.0037	
2	.5054	.8636	.9919	.8560	.4922	.0000	
0	0.5000	0.8585	0.9869	0.8509	0.4869		
Minus 2	0.4940	0.8523	0.9807	0.8447	0.4809		
4	.4876	.8451	.9732	.8375	.4744		
6	.4804	.8369	.9646	.8293	.4674		
8	.4727	.8277	.9548	.8201	.4597		
10	0.4644	0.8174	0.9445	0.8099	0.4521		
12	.4555	.8062	.9318	.7987	.4427		
14	.4461	.7939	.9185	.7866	.4334		
16	.4362	.7807	.9042	.7735	.4235		
18	0.4257	0.7666	0.8887	0.7594	0.4132		
20	.4147	.7514	.8722	.7444	.4023		
22	.4032	.7355	.8546	.7285	.3910		
24	.3911	.7186	.8359	.7117	.3792		
Declination of sun (degrees)	1800	1600	1400	1200	1000	0800	0600
	Solar time (southwest exposure)						

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 10 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2630	0.6114	0.8665	0.9599	0.8665	0.6114	0.2630
	22	.2422	.5959	.8491	.9495	.8491	.5959	.2422
	20	.2212	.5796	.8419	.9380	.8419	.5796	.2212
	18	.1998	.5625	.8281	.9253	.8281	.5625	.1998
	16	0.1783	0.5449	0.8133	0.9115	0.8133	0.5449	0.1783
	14	.1564	.5265	.7974	.8966	.7974	.5265	.1564
	12	.1345	.5075	.7806	.8806	.7806	.5075	.1345
	10	.1123	.4879	.7629	.8635	.7629	.4879	.1123
	8	0.0900	0.4677	0.7442	0.8454	0.7442	0.4677	0.0900
	6	.0676	.4469	.7246	.8262	.7246	.4469	.0676
	4	.0451	.4256	.7041	.8060	.7041	.4256	.0451
	2	.0226	.4037	.6828	.7849	.6828	.4037	.0226
	0	0.0000	0.3814	0.6606	0.7628	0.6606	0.3814	0.0000
Minus	2		0.3586	0.6376	0.7398	0.6376	0.3586	
	4		.3353	.6139	.7158	.6139	.3353	
	6		.3117	.5894	.6910	.5894	.3117	
	8		.2877	.5642	.6654	.5642	.2877	
	10		0.2633	0.5384	0.6389	0.5384	0.2633	
	12		.2386	.5117	.6117	.5117	.2386	
	14		.2136	.4845	.5837	.4845	.2136	
	16		.1884	.4568	.5550	.4568	.1884	
	18		0.1629	0.4284	0.5256	0.4284	0.1629	
	20		.1372	.3996	.4956	.3996	.1372	
	22		.1114	.3703	.4650	.3703	.1114	
	24		.0854	.3405	.4338	.3405	.0854	

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 20 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2315	0.6070	0.8820	0.9825	0.8820	0.6070	0.2315
	22	.2132	.5944	.8734	.9756	.8734	.5944	.2132
	20	.1947	.5810	.8638	.9671	.8638	.5810	.1947
	18	.1759	.5669	.8531	.9579	.8531	.5669	.1759
	16	0.1569	0.5521	0.8414	0.9473	0.8414	0.5521	0.1569
	14	.1377	.5366	.8286	.9355	.8286	.5366	.1377
	12	.1183	.5205	.8149	.9226	.8149	.5205	.1183
	10	.0988	.5037	.8001	.9086	.8001	.5037	.0988
	8	0.0792	0.4863	0.7844	0.8935	0.7844	0.4863	0.0792
	6	.0595	.4684	.7677	.8772	.7677	.4684	.0595
	4	.0397	.4496	.7501	.8599	.7501	.4496	.0397
	2	.0199	.4307	.7315	.8416	.7315	.4307	.0199
	0	0.0000	0.4111	0.7121	0.8223	0.7121	0.4111	0.0000
Minus	2		0.3910	0.6918	0.8019	0.6918	0.3910	
	4		.3704	.6707	.7805	.6707	.3704	
	6		.3494	.6487	.7582	.6487	.3494	
	8		.3279	.6259	.7350	.6259	.3279	
	10		0.3061	0.6027	0.7109	0.6027	0.3061	
	12		.2838	.5782	.6859	.5782	.2838	
	14		.2612	.5533	.6601	.5533	.2612	
	16		.2383	.5276	.6335	.5276	.2383	
	18		0.2151	0.5014	0.6061	0.5014	0.2151	
	20		.1917	.4745	.5780	.4745	.1917	
	22		.1680	.4470	.5492	.4470	.1680	
	24		.1441	.4190	.5197	.4190	.1441	

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 30 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.1991	0.5973	0.8890	0.9957	0.8890	0.5923	0.1991
	22	.1833	.5876	.8836	.9919	.8836	.5876	.1833
	20	.1674	.5771	.8771	.9869	.8771	.5771	.1674
	18	.1513	.5659	.8695	.9806	.8695	.5659	.1513
	16	0.1349	0.5540	0.8609	0.9732	0.8609	0.5540	0.1349
	14	.1184	.5415	.8512	.9646	.8512	.5415	.1184
	12	.1017	.5283	.8405	.9548	.8405	.5283	.1017
	10	.0850	.5144	.8287	.9438	.8287	.5144	.0850
	8	0.0681	0.4999	0.8160	0.9317	0.8160	0.4999	0.0681
	6	.0511	.4848	.8023	.9185	.8023	.4848	.0511
	4	.0341	.4691	.7875	.9041	.7875	.4691	.0341
	2	.0171	.4528	.7719	.8886	.7719	.4528	.0171
	0	0.0000	0.4360	0.7552	0.8721	0.7552	0.4360	0.0000
Minus	2		0.4187	0.7377	0.8545	0.7377	0.4187	
	4		.4008	.7193	.8358	.7193	.4008	
	6		.3825	.7000	.8161	.7000	.3825	
	8		.3637	.6798	.7955	.6798	.3637	
	10		0.3444	0.6591	0.7738	0.6591	0.3444	
	12		.3247	.6370	.7513	.6370	.3247	
	14		.3047	.6144	.7278	.6144	.3047	
	16		.2842	.5911	.7034	.5911	.2842	
	18		0.2635	0.5671	0.6781	0.5671	0.2635	
	20		.2424	.5423	.6521	.5423	.2424	
	22		.2209	.5169	.6252	.5169	.2209	
	24		.1993	.4909	.5976	.4909	.1993	

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 40 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.1667	0.5833	0.8884	1.0000	0.8884	0.5833	0.1667
	22	.1535	.5764	.8860	.9993	.8860	.5764	.1535
	20	.1402	.5687	.8825	.9973	.8825	.5687	.1402
	18	.1267	.5604	.8779	.9942	.8779	.5604	.1267
	16	0.1130	0.5514	0.8723	0.9898	0.8723	0.5514	0.1130
	14	.0992	.5417	.8656	.9842	.8656	.5417	.0992
	12	.0852	.5313	.8579	.9765	.8579	.5313	.0852
	10	.0712	.5203	.8491	.9695	.8491	.5203	.0712
	8	0.0571	0.5087	0.8393	0.9603	0.8393	0.5087	0.0571
	6	.0428	.4964	.8285	.9500	.8285	.4964	.0428
	4	.0286	.4835	.8166	.9385	.8166	.4835	.0286
	2	.0144	.4701	.8037	.9259	.8037	.4701	.0144
	0	0.0000	0.4561	0.7899	0.9121	0.7899	0.4561	0.0000
Minus	2		0.4415	0.7751	0.8973	0.7751	0.4415	
	4		.4263	.7594	.8813	.7594	.4263	
	6		.4107	.7428	.8643	.7428	.4107	
	8		.3946	.7252	.8462	.7252	.3946	
	10		0.3780	0.7072	0.8271	0.7072	0.3780	
	12		.3609	.6874	.8070	.6874	.3609	
	14		.3433	.6673	.7859	.6673	.3433	
	16		.3254	.6463	.7638	.6463	.3254	
	18		0.3071	0.6246	0.7408	0.6246	0.3071	
	20		.2884	.6021	.7169	.6021	.2884	
	22		.2693	.5789	.6922	.5789	.2693	
	24		.2499	.5549	.6666	.5549	.2499	

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 50 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.1353	0.5660	0.8814	0.9968	0.8814	0.5660	0.1353
	22	.1246	.5618	.8819	.9990	.8819	.5618	.1246
	20	.1138	.5569	.8812	1.0000	.8812	.5569	.1138
	18	.1028	.5512	.8795	.9997	.8795	.5512	.1028
	16	0.0917	0.5450	0.8768	0.9982	0.8768	0.5450	0.0917
	14	.0805	.5380	.8729	.9955	.8729	.5380	.0805
	12	.0692	.5304	.8680	.9916	.8680	.5304	.0692
	10	.0578	.5221	.8621	.9865	.8621	.5221	.0578
	8	0.0463	0.5132	0.8550	0.9801	0.8550	0.5132	0.0463
	6	.0347	.5037	.8470	.9726	.8470	.5037	.0347
	4	.0232	.4935	.8379	.9639	.8379	.4935	.0232
	2	.0117	.4828	.8278	.9541	.8278	.4828	.0117
	0	0.0000	0.4715	0.8167	0.9430	0.8167	0.4715	0.0000
Minus	2		0.4596	0.8046	0.9308	0.8046	0.4596	
	4		.4471	.7915	.9175	.7915	.4471	
	6		.4341	.7774	.9031	.7774	.4341	
	8		.4206	.7624	.8875	.7624	.4206	
	10		0.4066	0.7470	0.8709	0.7470	0.4066	
	12		.3920	.7297	.8532	.7297	.3920	
	14		.3770	.7119	.8345	.7119	.3770	
	16		.3615	.6933	.8148	.6933	.3615	
	18		0.3456	0.6739	0.7940	0.6739	0.3456	
	20		.3293	.6536	.7723	.6536	.3293	
	22		.3125	.6326	.7497	.6326	.3125	
	24		.2961	.6107	.7262	.6107	.2961	

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 60 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.1135	0.5465	0.8696	0.9878	0.8696	0.5465	0.1135
	22	.0972	.5449	.8727	.9926	.8727	.5449	.0972
	20	.0887	.5425	.8747	.9962	.8747	.5425	.0887
	18	.0802	.5393	.8756	.9987	.8756	.5393	.0802
	16	0.0715	0.5357	0.8755	0.9999	0.8755	0.5357	0.0715
	14	.0628	.5313	.8743	.9998	.8743	.5313	.0628
	12	.0539	.5262	.8720	.9986	.8720	.5262	.0539
	10	.0450	.5206	.8687	.9961	.8687	.5206	.0450
	8	0.0361	0.5143	0.8643	0.9924	0.8643	0.5143	0.0361
	6	.0271	.5074	.8589	.9876	.8589	.5074	.0271
	4	.0181	.4998	.8524	.9815	.8524	.4998	.0181
	2	.0091	.4916	.8449	.9742	.8449	.4916	.0091
	0	0.0000	0.4829	0.8364	0.9657	0.8364	0.4829	0.0000
Minus	2		0.4735	0.8268	0.9561	0.8268	0.4735	
	4		.4636	.8162	.9453	.8162	.4636	
	6		.4531	.8047	.9333	.8047	.4531	
	8		.4421	.7921	.9203	.7921	.4421	
	10		0.4305	0.7792	0.9060	0.7792	0.4305	
	12		.4184	.7641	.8907	.7641	.4184	
	14		.4058	.7488	.8743	.7488	.4058	
	16		.3927	.7325	.8568	.7325	.3927	
	18		0.3791	0.7153	0.8383	0.7153	0.3791	
	20		.3650	.6972	.8188	.6972	.3650	
	22		.3505	.6783	.7982	.6783	.3505	
	24		.3356	.6585	.7767	.6585	.3356	

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 70 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0777	0.5259	0.8542	0.9744	0.8542	0.5259	0.0777
	22	.0715	.5266	.8597	.9817	.8597	.5266	.0715
	20	.0653	.5265	.8642	.9877	.8642	.5265	.0653
	18	.0590	.5257	.8675	.9926	.8675	.5257	.0590
	16	0.0526	0.5244	0.8698	0.9962	0.8698	0.5244	0.0526
	14	.0462	.5224	.8710	.9986	.8710	.5224	.0462
	12	.0397	.5197	.8712	.9998	.8712	.5197	.0397
	10	.0334	.5165	.8703	.9998	.8703	.5165	.0334
	8	0.0266	0.5126	0.8684	0.9987	0.8684	0.5126	0.0266
	6	.0199	.5081	.8654	.9962	.8654	.5081	.0199
	4	.0133	.5029	.8613	.9925	.8613	.5029	.0133
	2	.0068	.4971	.8562	.9877	.8562	.4971	.0068
	0	0.0000	0.4908	0.8501	0.9816	0.8501	0.4908	0.0000
Minus	2		0.4838	0.8429	0.9743	0.8429	0.4838	
	4		.4763	.8347	.9659	.8347	.4763	
	6		.4681	.8255	.9563	.8255	.4681	
	8		.4595	.8152	.9455	.8152	.4595	
	10		0.4502	0.8047	0.9335	0.8047	0.4502	
	12		.4404	.7918	.9205	.7918	.4404	
	14		.4300	.7787	.9063	.7787	.4300	
	16		.4191	.7645	.8909	.7645	.4191	
	18		0.4078	0.7409	0.8745	0.7409	0.4078	
	20		.3959	.7335	.8571	.7335	.3959	
	22		.3835	.7167	.8386	.7167	.3835	
	24		.3707	.6989	.8191	.6989	.3707	

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 80 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0516	0.5048	0.8366	0.9580	0.8366	0.5048	0.0516
	22	.0478	.5076	.8442	.9675	.8442	.5076	.0478
	20	.0437	.5096	.8508	.9757	.8508	.5096	.0437
	18	.0395	.5110	.8564	.9827	.8564	.5110	.0395
	16	0.0352	0.5119	0.8609	0.9886	0.8609	0.5119	0.0352
	14	.0309	.5121	.8643	.9933	.8643	.5121	.0309
	12	.0265	.5116	.8667	.9967	.8667	.5116	.0265
	10	.0222	.5105	.8681	.9989	.8681	.5105	.0222
	8	0.0178	0.5089	0.8683	0.9999	0.8683	0.5089	0.0178
	6	.0133	.5065	.8676	.9997	.8676	.5065	.0133
	4	.0089	.5036	.8657	.9983	.8657	.5036	.0089
	2	.0046	.5000	.8629	.9957	.8629	.5000	.0046
	0	0.0000	0.4959	0.8589	0.9918	0.8589	0.4959	0.0000
Minus	2		0.4911	0.8539	0.9867	0.8539	0.4911	
	4		.4858	.8479	.9805	.8479	.4858	
	6		.4798	.8409	.9730	.8409	.4798	
	8		.4733	.8328	.9644	.8328	.4733	
	10		0.4662	0.8244	0.9545	0.8244	0.4662	
	12		.4585	.8136	.9436	.8136	.4585	
	14		.4503	.8025	.9314	.8025	.4503	
	16		.4415	.7905	.9182	.7905	.4415	
	18		0.4321	0.7774	0.9038	0.7774	0.4321	
	20		.4223	.7634	.8883	.7634	.4223	
	22		.4119	.7485	.8717	.7485	.4119	
	24		.4011	.7327	.8541	.7327	.4011	

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 90 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0285	0.4840	0.8177	0.9398	0.8177	0.4840	0.0285
	22	.0262	.4886	.8272	.9511	.8272	.4886	.0262
	20	.0239	.4926	.8357	.9613	.8357	.4926	.0239
	18	.0217	.4959	.8432	.9703	.8432	.4959	.0217
	16	0.0193	0.4987	0.8497	0.9782	0.8497	0.4987	0.0193
	14	.0170	.5009	.8552	.9849	.8552	.5009	.0170
	12	.0145	.5023	.8596	.9903	.8596	.5024	.0145
	10	.0121	.5033	.8629	.9945	.8629	.5033	.0121
	8	0.0097	0.5037	0.8652	0.9976	0.8652	0.5037	0.0097
	6	.0073	.5034	.8665	.9994	.8665	.5034	.0073
	4	.0049	.5024	.8667	1.0000	.8667	.5024	.0049
	2	.0026	.5009	.8658	.9994	.8658	.5009	.0026
	0	0.0000	0.4988	0.8639	0.9975	0.8639	0.4988	0.0000
Minus	2		0.4960	0.8609	0.9945	0.8609	0.4960	
	4		.4927	.8569	.9902	.8569	.4927	
	6		.4887	.8519	.9848	.8519	.4887	
	8		.4842	.8457	.9781	.8457	.4842	
	10		0.4790	0.8394	0.9702	0.8394	0.4790	
	12		.4733	.8305	.9612	.8305	.4733	
	14		.4670	.8213	.9510	.8213	.4670	
	16		.4601	.8111	.9396	.8111	.4601	
	18		0.4527	0.8000	0.9271	0.8000	0.4527	
	20		.4448	.7879	.9135	.7879	.4448	
	22		.4362	.7748	.8987	.7748	.4362	
	24		.4272	.7607	.8829	.7607	.4272	

Table 8.--Sin θ, latitude 46°--continued

Latitude: 46°
Slope: 100 percent

Exp: South

Declination of sun (degrees)		Solar time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0071	0.4636	0.7981	0.9205	0.7981	0.4636	0.0071
	22	.0065	.4700	.8094	.9336	.8094	.4700	.0065
	20	.0060	.4757	.8197	.9455	.8197	.4757	.0060
	18	.0054	.4808	.8289	.9563	.8289	.4808	.0054
	16	0.0048	0.4854	0.8372	0.9659	0.8372	0.4854	0.0048
	14	.0043	.4893	.8444	.9744	.8444	.4893	.0043
	12	.0036	.4926	.8506	.9816	.8506	.4926	.0036
	10	.0030	.4953	.8558	.9877	.8558	.4953	.0030
	8	0.0024	0.4975	0.8599	0.9925	0.8599	0.4975	0.0024
	6	.0018	.4990	.8630	.9962	.8630	.4990	.0018
	4	.0012	.4999	.8650	.9986	.8650	.4999	.0012
	2	.0007	.5002	.8660	.9999	.8660	.5002	.0007
	0	0.0000	0.4999	0.8659	0.9999	0.8659	0.4999	0.0000
Minus	2		0.4990	0.8648	0.9986	0.8648	0.4990	
	4		.4975	.8626	.9962	.8626	.4975	
	6		.4954	.8593	.9925	.8593	.4954	
	8		.4926	.8550	.9877	.8550	.4926	
	10		0.4893	0.8506	0.9820	0.8506	0.4893	
	12		.4854	.8433	.9744	.8433	.4854	
	14		.4808	.8360	.9659	.8360	.4808	
	16		.4757	.8275	.9563	.8275	.4757	
	18		0.4701	0.8181	0.9455	0.8181	0.4701	
	20		.4638	.8077	.9336	.8077	.4638	
	22		.4570	.7963	.9205	.7963	.4570	
	24		.4496	.7839	.9063	.7839	.4496	

Table 9.--Values of $p^{1/\sin A}$ for latitude 30°

Latitude: 30°
Value of p: 0.4

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0111	0.2166	0.3565	0.3980	0.3565	0.2166	0.0111
	22	.0075	.2109	.3541	.3964	.3541	.2109	.0075
	20	.0047	.2048	.3513	.3944	.3513	.2048	.0047
	18	.0027	.1983	.3479	.3919	.3479	.1983	.0027
	16	0.0013	0.1913	0.3441	0.3889	0.3441	0.1913	0.0013
	14	.0005	.1839	.3397	.3855	.3397	.1839	.0005
	12	.0001	.1760	.3349	.3816	.3349	.1760	.0001
	10	.0000	.1678	.3296	.3772	.3296	.1678	.0000
	8		0.1591	0.3237	0.3722	0.3237	0.1591	
	6		.1499	.3173	.3668	.3173	.1499	
	4		.1404	.3103	.3608	.3103	.1404	
	2		.1306	.3028	.3542	.3028	.1306	
	0		0.1205	0.2947	0.3471	0.2947	0.1205	
Minus	2		0.1101	0.2860	0.3395	0.2860	0.1101	
	4		.0995	.2768	.3311	.2768	.0995	
	6		.0888	.2669	.3222	.2669	.0888	
	8		.0780	.2563	.3126	.2563	.0780	
	10		0.0673	0.2452	0.3023	0.2452	0.0673	
	12		.0569	.2334	.2914	.2334	.0569	
	14		.0468	.2209	.2797	.2209	.0468	
	16		.0372	.2078	.2674	.2078	.0372	
	18		0.0284	0.1940	0.2542	0.1940	0.0284	
	20		.0206	.1797	.2404	.1797	.0206	
	22		.0139	.1647	.2258	.1647	.0139	
	24		.0085	.1493	.2104	.1493	.0085	

Table 9.--$p^{1/\sin A}$, latitude 30°--continued

Latitude: 30°
Value of p: 0.5

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0331	0.3144	0.4583	0.4981	0.4583	0.3144	0.0331
	22	.0247	.3081	.4560	.4966	.4560	.3081	.0247
	20	.0174	.3014	.4532	.4947	.4532	.3014	.0174
	18	.0113	.2940	.4499	.4923	.4499	.2940	.0113
	16	0.0065	0.2862	0.4461	0.4895	0.4461	0.2862	0.0065
	14	.0032	.2778	.4419	.4862	.4419	.2778	.0032
	12	.0013	.2687	.4371	.4825	.4371	.2687	.0013
	10	.0003	.2591	.4319	.4782	.4319	.2591	.0003
	8	0.0000	0.2489	0.4260	0.4735	0.4260	0.2489	0.0000
	6		.2380	.4196	.4682	.4196	.2380	
	4		.2265	.4127	.4625	.4127	.2265	
	2		.2145	.4051	.4561	.4051	.2145	
	0		0.2017	0.3969	0.4491	0.3969	0.2017	
Minus	2		0.1884	0.3879	0.4416	0.3879	0.1884	
	4		.1745	.3784	.4334	.3784	.1745	
	6		.1601	.3681	.4245	.3681	.1601	
	8		.1452	.3571	.4149	.3571	.1452	
	10		0.1299	0.3453	0.4046	0.3453	0.1299	
	12		.1143	.3326	.3935	.3326	.1143	
	14		.0986	.3191	.3815	.3191	.0986	
	16		.0829	.3046	.3687	.3046	.0829	
	18		0.0676	0.2893	0.3549	0.2893	0.0676	
	20		.0529	.2729	.3402	.2729	.0529	
	22		.0393	.2556	.3244	.2556	.0393	
	24		.0271	.2372	.3075	.2372	.0271	

Table 9.--$p^{1/\sin A}$, latitude 30°--continued

Latitude: 30°
Value of p: 0.6

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0811	0.4262	0.5627	0.5983	0.5627	0.4262	0.0811
	22	.0654	.4200	.5606	.5970	.5606	.4200	.0654
	20	.0504	.4131	.5581	.5953	.5581	.4131	.0504
	18	.0367	.4057	.5551	.5932	.5551	.4057	.0367
	16	0.0245	0.3978	0.5517	0.5907	0.5517	0.3978	0.0245
	14	.0147	.3890	.5478	.5878	.5478	.3890	.0147
	12	.0073	.3797	.5434	.5844	.5434	.3797	.0073
	10	.0029	.3697	.5386	.5807	.5386	.3697	.0029
	8	0.0006	0.3588	0.5332	0.5764	0.5332	0.3588	0.0006
	6	.0001	.3472	.5273	.5717	.5273	.3472	.0001
	4	.0000	.3348	.5208	.5665	.5208	.3348	.0000
	2		.3215	.5137	.5607	.5137	.3215	
	0		0.3073	0.5061	0.5544	0.5061	0.3073	
Minus	2		0.2923	0.4977	0.5475	0.4977	0.2923	
	4		.2763	.4886	.5400	.4886	.2763	
	6		.2593	.4788	.5318	.4788	.2593	
	8		.2412	.4682	.5229	.4682	.2412	
	10		0.2222	0.4567	0.5133	0.4567	0.2222	
	12		.2022	.4443	.5029	.4443	.2022	
	14		.1813	.4309	.4916	.4309	.1813	
	16		.1596	.4164	.4793	.4164	.1596	
	18		0.1373	0.4009	0.4661	0.4009	0.1373	
	20		.1147	.3841	.4517	.3841	.1147	
	22		.0921	.3659	.4362	.3659	.0921	
	24		.0701	.3464	.4193	.3464	.0701	

Table 9.--$p^{1/\sin A}$, latitude 30°--continued

Latitude: 30°
Value of p: 0.7

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.1731	0.5513	0.6693	0.6986	0.6693	0.5513	0.1731
	22	.1489	.5457	.6676	.6975	.6676	.5457	.1489
	20	.1242	.5395	.6655	.6961	.6655	.5395	.1242
	18	.0994	.5327	.6630	.6944	.6630	.5327	.0994
	16	0.0751	0.5253	0.6601	0.6924	0.6601	0.5253	0.0751
	14	.0525	.5173	.6569	.6900	.6569	.5173	.0525
	12	.0324	.5086	.6532	.6873	.6532	.5086	.0324
	10	.0164	.4991	.6492	.6842	.6492	.4991	.0164
	8	0.0059	0.4889	0.6446	0.6807	0.6446	0.4889	0.0059
	6	.0011	.4778	.6396	.6767	.6396	.4778	.0011
	4	.0000	.4657	.6341	.6724	.6341	.4657	.0000
	2		.4528	.6281	.6677	.6281	.4528	
	0		0.4388	0.6215	0.6624	0.6215	0.4388	
Minus	2		0.4237	0.6143	0.6567	0.6143	0.4237	
	4		.4073	.6065	.6503	.6065	.4073	
	6		.3896	.5979	.6435	.5979	.3896	
	8		.3705	.5887	.6359	.5887	.3705	
	10		0.3498	0.5786	0.6277	0.5786	0.3498	
	12		.3276	.5675	.6188	.5675	.3276	
	14		.3036	.5555	.6090	.5555	.3036	
	16		.2777	.5424	.5984	.5424	.2777	
	18		0.2500	0.5282	0.5868	0.5282	0.2500	
	20		.2205	.5126	.5741	.5126	.2205	
	22		.1892	.4956	.5603	.4956	.1892	
	24		.1563	.4770	.5451	.4770	.1563	

Table 9.--$p^{1/\sin A}$, latitude 30°--continued

Latitude: 30°
Value of p: 0.8

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3338	0.6890	0.7779	0.7990	0.7779	0.6890	0.3338
	22	.3038	.6846	.7766	.7983	.7766	.6846	.3038
	20	.2712	.6797	.7751	.7972	.7751	.6797	.2712
	18	.2359	.6743	.7733	.7960	.7733	.6743	.2359
	16	0.1980	0.6685	0.7712	0.7946	0.7712	0.6685	0.1980
	14	.1581	.6621	.7688	.7928	.7688	.6621	.1581
	12	.1170	.6551	.7661	.7909	.7661	.6551	.1170
	10	.0765	.6474	.7631	.7886	.7631	.6474	.0765
	8	0.0405	0.6391	0.7598	0.7861	0.7598	0.6391	0.0405
	6	.0140	.6300	.7561	.7832	.7561	.6300	.0140
	4	.0017	.6200	.7521	.7801	.7521	.6200	.0017
	2	.0000	.6092	.7476	.7767	.7476	.6092	.0000
	0		0.5973	0.7427	0.7728	0.7427	0.5973	
Minus	2		0.5843	0.7373	0.7687	0.7373	0.5843	
	4		.5701	.7314	.7640	.7314	.5701	
	6		.5545	.7249	.7589	.7249	.5545	
	8		.5373	.7178	.7534	.7178	.5373	
	10		0.5184	0.7101	0.7473	0.7101	0.5184	
	12		.4975	.7016	.7406	.7016	.4975	
	14		.4743	.6923	.7333	.6923	.4743	
	16		.4486	.6820	.7253	.6820	.4486	
	18		0.4201	0.6708	0.7164	0.6708	0.4201	
	20		.3883	.6583	.7067	.6583	.3883	
	22		.3528	.6446	.6960	.6446	.3528	
	24		.3132	.6293	.6841	.6293	.3132	

Table 9.--$p^{1/\sin A}$, latitude 30°--continued

Latitude: 30°
Value of p: 0.9

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.5957	0.8387	0.8882	0.8995	0.8882	0.8387	0.5957
	22	.5698	.8361	.8875	.8991	.8875	.8361	.5698
	20	.5400	.8333	.8867	.8985	.8867	.8333	.5400
	18	.5056	.8302	.8857	.8979	.8857	.8302	.5056
	16	0.4655	0.8268	0.8845	0.8971	0.8845	0.8268	0.4655
	14	.4186	.8231	.8833	.8962	.8833	.8231	.4186
	12	.3631	.8189	.8818	.8951	.8818	.8189	.3631
	10	.2971	.8144	.8802	.8939	.8802	.8144	.2971
	8	0.2201	0.8095	0.8783	0.8926	0.8783	0.8095	0.2201
	6	.1334	.8040	.8763	.8911	.8763	.8040	.1334
	4	.0489	.7979	.8741	.8894	.8741	.7979	.0489
	2	.0024	.7913	.8717	.8875	.8717	.7913	.0024
	0	0.0000	0.7840	0.8689	0.8854	0.8689	0.7840	0.0000
Minus	2		0.7759	0.8660	0.8832	0.8660	0.7759	
	4		.7670	.8627	.8807	.8627	.7670	
	6		.7570	.8591	.8779	.8591	.7570	
	8		.7458	.8551	.8748	.8551	.7458	
	10		0.7333	0.8507	0.8715	0.8507	0.7333	
	12		.7192	.8459	.8678	.8459	.7192	
	14		.7032	.8406	.8637	.8406	.7032	
	16		.6849	.8347	.8593	.8347	.6849	
	18		0.6640	0.8282	0.8543	0.8282	0.6640	
	20		.6398	.8209	.8488	.8209	.6398	
	22		.6115	.8127	.8427	.8127	.6115	
	24		.5780	.8036	.8359	.8036	.5780	

Table 10.--Values of $p^{1/\sin A}$ for latitude 34°

Latitude: 34°
Value of p: 0.4

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0178	0.2205	0.3544	0.3944	0.3544	0.2205	0.0178
	22	.0126	.2137	.3510	.3918	.3510	.2137	.0126
	20	.0083	.2065	.3471	.3889	.3471	.2065	.0083
	18	.0050	.1987	.3427	.3855	.3427	.1987	.0050
	16	0.0026	0.1905	0.3378	0.3816	0.3378	0.1905	0.0026
	14	.0011	.1818	.3324	.3772	.3324	.1818	.0011
	12	.0004	.1727	.3265	.3722	.3265	.1727	.0004
	10	.0001	.1631	.3200	.3667	.3200	.1631	.0001
	8	0.0000	0.1531	0.3130	0.3608	0.3130	0.1531	0.0000
	6		.1427	.3054	.3542	.3054	.1427	
	4		.1320	.2972	.3471	.2972	.1320	
	2		.1210	.2885	.3395	.2885	.1210	
	0		0.1096	0.2791	0.3311	0.2791	0.1096	
Minus	2		.0981	.2691	.3222	.2691	.0981	
	4		.0866	.2584	.3126	.2584	.0866	
	6		.0750	.2472	.3023	.2472	.0750	
	8		.0637	.2353	.2914	.2353	.0637	
	10		0.0526	0.2227	0.2797	0.2227	0.0526	
	12		.0421	.2094	.2674	.2094	.0421	
	14		.0323	.1955	.2542	.1955	.0323	
	16		.0235	.1809	.2404	.1809	.0235	
	18		0.0159	0.1659	0.2258	0.1659	0.0159	
	20		.0098	.1502	.2104	.1502	.0098	
	22		.0053	.1342	.1943	.1342	.0053	
	24		.0023	.1178	.1774	.1178	.0023	

Table 10.--$p^{1/\sin A}$, latitude 34°--continued

Latitude: 34°
Value of p: 0.5

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0474	0.3187	0.4562	0.4947	0.4562	0.3187	0.0474
	22	.0366	.3112	.4529	.4923	.4529	.3112	.0366
	20	.0267	.3032	.4491	.4895	.4491	.3032	.0267
	18	.0181	.2945	.4448	.4862	.4448	.2945	.0181
	16	0.0111	0.2853	0.4400	0.4825	0.4400	0.2853	0.0111
	14	.0059	.2754	.4347	.4782	.4347	.2754	.0059
	12	.0026	.2648	.4288	.4735	.4288	.2648	.0026
	10	.0008	.2537	.4223	.4682	.4223	.2537	.0008
	8	0.0001	0.2418	0.4153	0.4625	0.4153	0.2418	0.0001
	6	.0000	.2293	.4077	.4561	.4077	.2293	.0000
	4		.2161	.3994	.4491	.3994	.2161	
	2		.2023	.3905	.4416	.3905	.2023	
	0		0.1878	0.3808	0.4334	0.3808	0.1878	
Minus	2		0.1727	0.3704	0.4245	0.3704	0.1727	
	4		.1571	.3593	.4149	.3593	.1571	
	6		.1410	.3474	.4046	.3474	.1410	
	8		.1245	.3346	.3934	.3346	.1245	
	10		0.1077	0.3210	0.3815	0.3210	0.1077	
	12		.0910	.3064	.3687	.3064	.0910	
	14		.0745	.2909	.3549	.2909	.0745	
	16		.0586	.2744	.3402	.2744	.0586	
	18		0.0437	0.2569	0.3244	0.2569	0.0437	
	20		.0303	.2384	.3075	.2384	.0303	
	22		.0190	.2188	.2895	.2188	.0190	
	24		.0102	.1984	.2703	.1984	.0102	

Table 10.--$p^{1/\sin A}$, latitude 34°--continued

Latitude: 34°
Value of p: 0.6

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.1058	0.4305	0.5608	0.5953	0.5608	0.4305	0.1058
	22	.0873	.4230	.5578	.5932	.5578	.4230	.0873
	20	.0692	.4150	.5544	.5907	.5544	.4150	.0692
	18	.0520	.4062	.5504	.5878	.5504	.4062	.0520
	16	0.0363	0.3968	0.5461	0.5844	0.5461	0.3968	0.0363
	14	.0229	.3866	.5411	.5807	.5411	.3866	.0229
	12	.0123	.3756	.5357	.5764	.5357	.3756	.0123
	10	.0052	.3639	.5298	.5717	.5298	.3639	.0052
	8	0.0014	0.3513	0.5233	0.5665	0.5233	0.3513	0.0014
	6	.0002	.3378	.5162	.5607	.5162	.3378	.0002
	4	.0000	.3234	.5084	.5544	.5084	.3234	.0000
	2		.3080	.5001	.5475	.5001	.3080	
	0		0.2916	0.4909	0.5400	0.4909	0.2916	
Minus	2		0.2741	0.4810	0.5318	0.4810	0.2741	
	4		.2556	.4703	.5229	.4703	.2556	
	6		.2360	.4588	.5133	.4588	.2360	
	8		.2154	.4463	.5029	.4463	.2154	
	10		0.1936	0.4328	0.4916	0.4328	0.1936	
	12		.1709	.4182	.4793	.4182	.1709	
	14		.1475	.4025	.4660	.4025	.1475	
	16		.1236	.3856	.4517	.3856	.1236	
	18		0.0995	0.3673	0.4362	0.3673	0.0995	
	20		.0761	.3476	.4193	.3476	.0761	
	22		.0539	.3264	.4011	.3264	.0539	
	24		.0342	.3036	.3814	.3036	.0342	

Table 10.--$p^{1/\sin A}$, latitude 34°--continued

Latitude: 34°
Value of p: 0.7

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2083	0.5552	0.6678	0.6961	0.6678	0.5552	0.2083
	22	.1822	.5484	.6653	.6944	.6653	.5484	.1822
	20	.1550	.5411	.6624	.6924	.6624	.5411	.1550
	18	.1270	.5331	.6591	.6900	.6591	.5331	.1270
	16	0.0988	0.5244	0.6554	0.6873	0.6554	0.5244	0.0988
	14	.0716	.5150	.6513	.6842	.6513	.5150	.0716
	12	.0466	.5047	.6468	.6807	.6468	.5047	.0466
	10	.0254	.4937	.6418	.6767	.6418	.4937	.0254
	8	0.0102	0.4817	0.6362	0.6724	0.6362	0.4817	0.0102
	6	.0022	.4687	.6302	.6677	.6302	.4687	.0022
	4	.0001	.4546	.6236	.6624	.6236	.4546	.0001
	2	.0000	.4395	.6164	.6567	.6164	.4395	.0000
	0		0.4229	0.6085	0.6503	0.6085	0.4229	
Minus	2		0.4051	0.5999	0.6435	0.5999	0.4051	
	4		.3858	.5905	.6359	.5905	.3858	
	6		.3649	.5804	.6277	.5804	.3649	
	8		.3423	.5693	.6188	.5693	.3423	
	10		0.3177	0.5573	0.6090	0.5573	0.3177	
	12		.2913	.5441	.5984	.5441	.2913	
	14		.2628	.5298	.5868	.5298	.2628	
	16		.2322	.5140	.5741	.5140	.2322	
	18		0.1997	0.4969	0.5603	0.4969	0.1997	
	20		.1655	.4781	.5451	.4781	.1655	
	22		.1301	.4576	.5284	.4576	.1301	
	24		.0947	.4350	.5101	.4350	.0947	

Table 10--$p^{1/\sin A}$, latitude 34°--continued

Latitude: 34°
Value of p: 0.8

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.3748	0.6920	0.7767	0.7972	0.7767	0.6920	0.3748
	22	.3447	.6867	.7749	.7960	.7749	.6867	.3447
	20	.3115	.6810	.7728	.7945	.7728	.6810	.3115
	18	.2749	.6747	.7704	.7928	.7704	.6747	.2749
	16	0.2350	0.6678	0.7677	0.7909	0.7677	0.6678	0.2350
	14	.1922	.6602	.7647	.7886	.7647	.6602	.1922
	12	.1468	.6520	.7614	.7861	.7614	.6520	.1468
	10	.1005	.6430	.7577	.7833	.7577	.6430	.1005
	8	0.0568	0.6332	0.7536	0.7801	0.7536	0.6332	0.0568
	6	.0221	.6225	.7491	.7767	.7491	.6225	.0221
	4	.0033	.6107	.7442	.7728	.7442	.6107	.0033
	2	.0000	.5979	.7388	.7687	.7388	.5979	.0000
	0		0.5837	0.7329	0.7640	0.7329	0.5837	
Minus	2		0.5682	0.7264	0.7589	0.7264	0.5682	
	4		.5511	.7193	.7534	.7193	.5511	
	6		.5322	.7115	.7473	.7115	.5322	
	8		.5113	.7030	.7406	.7030	.5113	
	10		0.4881	0.6936	0.7333	0.6936	0.4881	
	12		.4623	.6833	.7253	.6833	.4623	
	14		.4334	.6720	.7164	.6720	.4334	
	16		.4011	.6595	.7067	.6595	.4011	
	18		0.3650	0.6456	0.6960	0.6456	0.3650	
	20		.3246	.6303	.6841	.6303	.3246	
	22		.2792	.6131	.6710	.6131	.2792	
	24		.2288	.5941	.6563	.5941	.2288	

Table 10.--$p^{1/\sin A}$, latitude 34°--continued

Latitude: 34°
Value of p: 0.9

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.6292	0.8404	0.8875	0.8985	0.8875	0.8404	0.6292
	22	.6048	.8374	.8866	.8979	.8866	.8374	.6048
	20	.5765	.8341	.8854	.8971	.8854	.8341	.5765
	18	.5435	.8304	.8841	.8962	.8841	.8304	.5435
	16	0.5047	0.8264	0.8827	0.8951	0.8827	0.8264	0.5047
	14	.4590	.8220	.8810	.8939	.8810	.8220	.4590
	12	.4042	.8171	.8792	.8926	.8792	.8171	.4042
	10	.3379	.8118	.8772	.8911	.8772	.8118	.3379
	8	0.2581	0.8059	0.8750	0.8894	0.8750	0.8059	0.2581
	6	.1651	.7994	.8725	.8875	.8725	.7994	.1651
	4	.0671	.7923	.8698	.8854	.8698	.7923	.0671
	2	.0045	.7844	.8668	.8832	.8668	.7844	.0045
	0	0.0000	0.7755	0.8635	0.8807	0.8635	0.7755	0.0000
Minus	2		.7657	.8599	.8779	.8599	.7657	
	4		.7548	.8559	.8748	.8559	.7548	
	6		.7425	.8515	.8715	.8515	.7425	
	8		.7286	.8467	.8678	.8467	.7286	
	10		0.7127	0.8414	0.8637	0.8414	0.7127	
	12		.6947	.8354	.8593	.8354	.6947	
	14		.6738	.8289	.8543	.8289	.6738	
	16		.6497	.8215	.8488	.8215	.6497	
	18		0.6213	0.8133	0.8427	0.8133	0.6213	
	20		.5878	.8041	.8359	.8041	.5878	
	22		.5475	.7938	.8283	.7938	.5475	
	24		.4984	.7820	.8197	.7820	.4984	

Table 11.--Values of $p^{1/\sin A}$ for latitude 38°

Latitude: 38°
Value of p: 0.4

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0257	0.2228	0.3504	0.3889	0.3504	0.2228	0.0257
	22	.0188	.2149	.3460	.3855	.3460	.2149	.0188
	20	.0129	.2065	.3411	.3816	.3411	.2065	.0129
	18	.0081	.1975	.3356	.3771	.3356	.1975	.0081
	16	0.0045	0.1881	0.3297	0.3722	0.3297	0.1881	0.0045
	14	.0021	.1782	.3231	.3667	.3231	.1782	.0021
	12	.0008	.1678	.3161	.3608	.3161	.1678	.0008
	10	.0002	.1570	.3084	.3542	.3084	.1570	.0002
	8	0.0000	0.1458	0.3002	0.3471	0.3002	0.1458	0.0000
	6		.1342	.2914	.3394	.2914	.1342	
	4		.1223	.2819	.3311	.2819	.1223	
	2		.1101	.2719	.3222	.2719	.1101	
	0		0.0977	0.2611	0.3126	0.2611	0.0977	
Minus	2		0.0853	0.2497	0.3023	0.2497	0.0853	
	4		.0730	.2377	.2914	.2377	.0730	
	6		.0609	.2250	.2797	.2250	.0609	
	8		.0493	.2117	.2674	.2117	.0493	
	10		0.0384	0.1977	0.2542	0.1977	0.0384	
	12		.0284	.1830	.2404	.1830	.0284	
	14		.0197	.1677	.2258	.1677	.0197	
	16		.0125	.1519	.2104	.1519	.0125	
	18		0.0070	0.1357	0.1943	0.1357	0.0070	
	20		.0032	.1191	.1774	.1191	.0032	
	22		.0011	.1024	.1600	.1024	.0011	
	24		.0002	.0857	.1420	.0857	.0002	

Table 11.--$p^{1/\sin A}$, latitude 38°--continued

Latitude: 38°
Value of p: 0.5

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0628	0.3212	0.4524	0.4895	0.4524	0.3212	0.0628
	22	.0495	.3125	.4481	.4862	.4481	.3125	.0495
	20	.0372	.3032	.4432	.4825	.4432	.3032	.0372
	18	.0261	.2932	.4379	.4782	.4379	.2932	.0261
	16	0.0168	0.2825	0.4319	0.4735	0.4319	0.2825	0.0168
	14	.0095	.2712	.4255	.4682	.4255	.2712	.0095
	12	.0044	.2592	.4184	.4625	.4184	.2592	.0044
	10	.0015	.2465	.4107	.4561	.4107	.2465	.0015
	8	0.0003	0.2331	0.4024	0.4491	0.4024	0.2331	0.0003
	6	.0000	.2188	.3935	.4416	.3935	.2188	.0000
	4		.2040	.3837	.4334	.3837	.2040	
	2		.1884	.3733	.4245	.3733	.1884	
	0		0.1722	0.3621	0.4149	0.3621	0.1722	
Minus	2		0.1554	0.3501	0.4046	0.3501	0.1554	
	4		.1381	.3373	.3935	.3373	.1381	
	6		.1205	.3236	.3815	.3236	.1205	
	8		.1027	.3089	.3687	.3089	.1027	
	10		0.0849	0.2933	0.3549	0.2933	0.0849	
	12		.0677	.2767	.3402	.2767	.0677	
	14		.0513	.2591	.3244	.2591	.0513	
	16		.0363	.2404	.3075	.2404	.0363	
	18		0.0233	0.2207	0.2895	0.2207	0.0233	
	20		.0130	.2000	.2703	.2000	.0130	
	22		.0058	.1784	.2500	.1784	.0058	
	24		.0018	.1559	.2285	.1559	.0018	

Table 11.--$p^{1/\sin A}$, latitude 38°--continued

Latitude: 38°
Value of p: 0.6

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.1300	0.4330	0.5573	0.5907	0.5573	0.4330	0.1300
	22	.1091	.4243	.5534	.5878	.5534	.4243	.1091
	20	.0884	.4150	.5490	.5844	.5490	.4150	.0884
	18	.0682	.4049	.5441	.5807	.5441	.4049	.0682
	16	0.0493	0.3940	0.5387	0.5764	0.5387	0.3940	0.0493
	14	.0324	.3823	.5327	.5717	.5327	.3823	.0324
	12	.0185	.3697	.5262	.5665	.5262	.3697	.0185
	10	.0084	.3562	.5191	.5607	.5191	.3562	.0084
	8	0.0026	0.3418	0.5113	0.5544	0.5113	0.3418	0.0026
	6	.0003	.3264	.5029	.5475	.5029	.3264	.0003
	4	.0000	.3099	.4937	.5400	.4937	.3099	.0000
	2		.2923	.4838	.5318	.4838	.2923	
	0		0.2735	0.4730	0.5229	0.4730	0.2735	
Minus	2		0.2536	0.4614	0.5133	0.4614	0.2536	
	4		.2324	.4489	.5029	.4489	.2324	
	6		.2102	.4354	.4916	.4354	.2102	
	8		.1868	.4208	.4793	.4208	.1868	
	10		0.1625	0.4050	0.4661	0.4050	0.1625	
	12		.1374	.3880	.4517	.3880	.1374	
	14		.1121	.3696	.4362	.3696	.1121	
	16		.0868	.3498	.4193	.3498	.0868	
	18		0.0627	0.3284	0.4011	0.3284	0.0627	
	20		.0408	.3054	.3814	.3054	.0408	
	22		.0225	.2807	.3600	.2807	.0225	
	24		.0094	.2542	.3369	.2542	.0094	

Table 11.--$p^{1/\sin A}$, latitude 38°--continued

Latitude: 38°
Value of p: 0.7

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2406	0.5574	0.6649	0.6924	0.6649	0.5574	0.2406
	22	.2129	.5496	.6616	.6900	.6616	.5496	.2129
	20	.1839	.5411	.6579	.6873	.6579	.5411	.1839
	18	.1533	.5319	.6538	.6842	.6538	.5319	.1533
	16	0.1222	0.5218	0.6492	0.6807	0.6492	0.5218	0.1222
	14	.0911	.5110	.6442	.6767	.6442	.5110	.0911
	12	.0616	.4992	.6387	.6724	.6387	.4992	.0616
	10	.0356	.4864	.6326	.6677	.6326	.4864	.0356
	8	0.0156	0.4726	0.6260	0.6624	0.6260	0.4726	0.0156
	6	.0039	.4576	.6188	.6566	.6188	.4576	.0039
	4	.0002	.4413	.6109	.6503	.6109	.4413	.0002
	2	.0000	.4237	.6023	.6435	.6023	.4237	.0000
	0		0.4044	0.5929	0.6359	0.5929	0.4044	
Minus	2		0.3836	0.5827	0.6277	0.5827	0.3836	
	4		.3610	.5717	.6188	.5717	.3610	
	6		.3365	.5595	.6090	.5595	.3365	
	8		.3099	.5464	.5984	.5464	.3099	
	10		0.2811	0.5320	0.5868	0.5320	0.2811	
	12		.2501	.5163	.5741	.5163	.2501	
	14		.2169	.4991	.5603	.4991	.2169	
	16		.1815	.4803	.5451	.4803	.1815	
	18		0.1447	0.4596	0.5284	0.4596	0.1447	
	20		.1072	.4369	.5101	.4369	.1072	
	22		.0708	.4119	.4900	.4119	.0708	
	24		.0385	.3843	.4678	.3843	.0385	

Table 11.--$p^{1/\sin A}$, latitude 38°--continued

Latitude: 38°
Value of p: 0.8

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4102	0.6937	0.7746	0.7945	0.7746	0.6937	0.4102
	22	.3800	.6877	.7722	.7928	.7722	.6877	.3800
	20	.3466	.6810	.7695	.7909	.7695	.6810	.3466
	18	.3094	.6737	.7665	.7886	.7665	.6737	.3094
	16	0.2685	0.6657	0.7632	0.7861	0.7632	0.6657	0.2685
	14	.2234	.6570	.7595	.7833	.7595	.6570	.2234
	12	.1749	.6475	.7554	.7801	.7554	.6475	.1749
	10	.1240	.6371	.7509	.7767	.7509	.6371	.1240
	8	0.0740	0.6257	0.7460	0.7728	0.7460	0.6257	0.0740
	6	.0311	.6131	.7406	.7686	.7406	.6131	.0311
	4	.0055	.5994	.7347	.7640	.7347	.5994	.0055
	2	.0000	.5843	.7282	.7589	.7282	.5843	.0000
	0		0.5676	0.7211	0.7534	0.7211	0.5676	
Minus	2		0.5492	0.7133	0.7473	0.7133	0.5492	
	4		.5287	.7048	.7406	.7048	.5287	
	6		.5059	.6954	.7333	.6954	.5059	
	8		.4805	.6851	.7253	.6851	.4805	
	10		0.4521	0.6738	0.7164	0.6738	0.4521	
	12		.4202	.6613	.7067	.6613	.4202	
	14		.3844	.6474	.6960	.6474	.3844	
	16		.3438	.6320	.6841	.6320	.3438	
	18		0.2984	0.6149	0.6710	0.6149	0.2984	
	20		.2473	.5957	.6563	.5957	.2473	
	22		.1908	.5741	.6400	.5741	.1908	
	24		.1303	.5498	.6217	.5498	.1303	

Table 11.--$p^{1/\sin A}$, latitude 38°--continued

Latitude: 38°
Value of p: 0.9

Declination of sun (degrees)	Solar Time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.6565	0.8414	0.8864	0.8971	0.8864	0.8414	0.6565
22	.6332	.8379	.8851	.8962	.8851	.8379	.6332
20	.6063	.8341	.8837	.8951	.8837	.8341	.6063
18	.5747	.8299	.8820	.8939	.8820	.8299	.5747
16	0.5375	0.8252	0.8802	0.8926	0.8802	0.8252	0.5375
14	.4928	.8201	.8782	.8911	.8782	.8201	.4928
12	.4391	.8145	.8759	.8894	.8759	.8145	.4391
10	.3732	.8082	.8735	.8875	.8735	.8082	.3732
8	0.2925	0.8014	0.8708	0.8854	0.8708	0.8014	0.2925
6	.1943	.7938	.8678	.8832	.8678	.7938	.1943
4	.0858	.7853	.8645	.8806	.8645	.7853	.0858
2	.0074	.7759	.8609	.8779	.8609	.7759	.0074
0	0.0000	0.7653	0.8569	0.8748	0.8569	0.7653	0.0000
Minus 2		0.7535	0.8525	0.8715	0.8525	0.7535	
4		.7401	.8477	.8678	.8477	.7401	
6		.7249	.8424	.8637	.8424	.7249	
8		.7075	.8365	.8593	.8365	.7075	
10		0.6874	0.8299	0.8543	0.8299	0.6874	
12		.6641	.8226	.8488	.8226	.6641	
14		.6367	.8144	.8427	.8144	.6367	
16		.6040	.8052	.8359	.8052	.6040	
18		0.5649	0.7948	0.8283	0.7948	0.5649	
20		.5170	.7830	.8197	.7830	.5170	
22		.4574	.7695	.8100	.7695	.4574	
24		.3821	.7539	.7990	.7539	.3821	

Table 12.--Values of $p^{1/\sin A}$ for latitude 42°

Latitude: 42°
Value of p: 0.4

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0345	0.2235	0.3446	0.3816	0.3446	0.2235	0.0345
	22	.0259	.2145	.3392	.3772	.3392	.2145	.0259
	20	.0183	.2049	.3331	.3722	.3331	.2049	.0183
	18	.0119	.1948	.3266	.3668	.3266	.1948	.0119
	16	0.0069	0.1842	0.3195	0.3608	0.3195	0.1842	0.0069
	14	.0035	.1731	.3118	.3542	.3118	.1731	.0035
	12	.0014	.1615	.3036	.3471	.3036	.1615	.0014
	10	.0004	.1495	.2947	.3394	.2947	.1495	.0004
	8	0.0000	0.1371	0.2852	0.3311	0.2852	0.1371	0.0000
	6		.1243	.2751	.3222	.2751	.1243	
	4		.1113	.2644	.3126	.2644	.1113	
	2		.0981	.2529	.3024	.2529	.0981	
	0		0.0849	0.2408	0.2914	0.2408	0.0849	
Minus	2		0.0719	0.2280	0.2797	0.2280	0.0719	
	4		.0591	.2146	.2674	.2146	.0591	
	6		.0470	.2004	.2542	.2004	.0470	
	8		.0356	.1857	.2404	.1857	.0356	
	10		0.0255	0.1703	0.2258	0.1703	0.0255	
	12		.0168	.1544	.2104	.1544	.0168	
	14		.0099	.1380	.1942	.1380	.0099	
	16		.0050	.1212	.1774	.1212	.0050	
	18		0.0019	0.1043	0.1600	0.1043	0.0019	
	20		.0005	.0874	.1420	.0874	.0005	
	22		.0001	.0708	.1237	.0708	.0001	
	24		.0000	.0549	.1051	.0549	.0000	

Table 12.--$p^{1/\sin A}$, latitude 42°--continued

Latitude: 42°
Value of p: 0.5

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0784	0.3220	0.4467	0.4825	0.4467	0.3220	0.0784
	22	.0630	.3120	.4413	.4782	.4413	.3120	.0630
	20	.0484	.3014	.4354	.4735	.4354	.3014	.0484
	18	.0350	.2902	.4289	.4682	.4289	.2902	.0350
	16	0.0233	0.2781	0.4218	0.4625	0.4218	0.2781	0.0233
	14	.0138	.2653	.4141	.4561	.4141	.2653	.0138
	12	.0068	.2518	.4058	.4491	.4058	.2518	.0068
	10	.0026	.2374	.3968	.4416	.3968	.2374	.0026
	8	0.0006	0.2224	0.3871	0.4334	0.3871	.2224	.0006
	6	.0000	.2066	.3767	.4245	.3767	.2066	.0000
	4		.1899	.3655	.4149	.3655	.1899	
	2		.1727	.3535	.4046	.3535	.1727	
	0		0.1548	0.3406	0.3934	0.3406	0.1548	
Minus	2		0.1364	0.3268	0.3815	0.3268	0.1364	
	4		.1177	.3121	.3686	.3121	.1177	
	6		.0989	.2965	.3549	.2965	.0989	
	8		.0803	.2798	.3402	.2798	.0803	
	10		0.0623	0.2621	0.3244	0.2621	0.0623	
	12		.0455	.2433	.3075	.2433	.0455	
	14		.0305	.2235	.2895	.2235	.0305	
	16		.0181	.2026	.2703	.2026	.0181	
	18		0.0088	0.1808	0.2500	0.1808	0.0088	
	20		.0031	.1582	.2285	.1582	.0031	
	22		.0006	.1350	.2058	.1350	.0006	
	24		.0000	.1114	.1819	.1114	.0000	

Table 12.--$p^{1/\sin A}$, latitude 42°--continued

Latitude: 42°
Value of p: 0.6

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.1531	0.4338	0.5522	0.5844	0.5522	0.4338	0.1531
	22	.1303	.4239	.5473	.5806	.5473	.4239	.1303
	20	.1074	.4132	.5418	.5764	.5418	.4132	.1074
	18	.0846	.4018	.5359	.5717	.5359	.4018	.0846
	16	0.0626	0.3894	0.5294	0.5665	0.5294	0.3894	0.0626
	14	.0426	.3761	.5222	.5607	.5222	.3761	.0426
	12	.0254	.3619	.5145	.5544	.5145	.3619	.0254
	10	.0123	.3466	.5060	.5475	.5060	.3466	.0123
	8	0.0041	0.3303	0.4969	0.5400	0.4969	0.3303	0.0041
	6	.0007	.3128	.4870	.5318	.4870	.3128	.0007
	4	.0000	.2940	.4763	.5230	.4763	.2940	.0000
	2		.2741	.4647	.5134	.4647	.2741	
	0		0.2529	0.4522	0.5029	0.4522	0.2529	
Minus	2		0.2304	0.4386	0.4916	0.4386	0.2304	
	4		.2067	.4240	.4793	.4240	.2067	
	6		.1818	.4082	.4660	.4082	.1818	
	8		.1558	.3911	.4517	.3911	.1558	
	10		0.1293	0.3727	0.4362	0.3727	0.1293	
	12		.1025	.3529	.4194	.3529	.1025	
	14		.0765	.3314	.4011	.3314	.0765	
	16		.0519	.3084	.3814	.3084	.0519	
	18		0.0307	0.2836	0.3600	0.2836	0.0307	
	20		.0143	.2569	.3369	.2569	.0143	
	22		.0043	.2286	.3118	.2286	.0043	
	24		.0005	.1984	.2848	.1984	.0005	

Table 12.--$p^{1/\sin A}$, latitude 42°--continued

Latitude: 42°
Value of p: 0.7

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.2697	0.5581	0.6605	0.6873	0.6605	0.5581	0.2697
	22	.2410	.5492	.6564	.6842	.6564	.5492	.2410
	20	.2105	.5395	.6519	.6807	.6519	.5395	.2105
	18	.1782	.5290	.6469	.6768	.6469	.5290	.1782
	16	0.1445	0.5176	0.6414	0.6724	0.6414	0.5176	0.1445
	14	.1105	.5052	.6353	.6676	.6353	.5052	.1105
	12	.0770	.4918	.6287	.6624	.6287	.4918	.0770
	10	.0464	.4772	.6215	.6567	.6215	.4772	.0464
	8	0.0217	0.4614	0.6136	0.6503	0.6136	0.4614	0.0217
	6	.0061	.4442	.6051	.6435	.6051	.4442	.0061
	4	.0005	.4254	.5958	.6360	.5958	.4254	.0005
	2	.0000	.4051	.5856	.6278	.5856	.4051	.0000
	0		0.3830	0.5745	0.6188	0.5745	0.3830	
Minus	2		0.3588	0.5624	0.6090	0.5624	0.3588	
	4		.3326	.5493	.5984	.5493	.3326	
	6		.3041	.5349	.5868	.5349	.3041	
	8		.2731	.5192	.5741	.5192	.2731	
	10		0.2397	0.5020	0.5603	0.5020	0.2397	
	12		.2039	.4832	.5451	.4832	.2039	
	14		.1661	.4625	.5284	.4625	.1661	
	16		.1268	.4398	.5101	.4398	.1268	
	18		0.0878	0.4148	0.4900	0.4148	0.0878	
	20		.0516	.3872	.4678	.3872	.0516	
	22		.0224	.3568	.4433	.3568	.0224	
	24		.0050	.3232	.4160	.3232	.0050	

Table 12.--$p^{1/\sin A}$, latitude 42°--continued

Latitude: 42°
Value of p: 0.8

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4405	0.6943	0.7715	0.7909	0.7715	0.6943	0.4405
	22	.4106	.6874	.7685	.7886	.7685	.6874	.4106
	20	.3772	.6797	.7651	.7861	.7651	.6797	.3772
	18	.3399	.6714	.7615	.7833	.7615	.6714	.3399
	16	0.2982	0.6623	0.7574	0.7802	0.7574	0.6623	0.2982
	14	.2520	.6524	.7529	.7767	.7529	.6524	.2520
	12	.2010	.6415	.7480	.7728	.7480	.6415	.2010
	10	.1466	.6295	.7426	.7686	.7426	.6295	.1466
	8	0.0910	0.6164	0.7367	0.7640	0.7367	0.6164	0.0910
	6	.0411	.6019	.7303	.7589	.7303	.6019	.0411
	4	.0084	.5858	.7232	.7534	.7232	.5858	.0084
	2	.0001	.5682	.7155	.7473	.7155	.5682	.0001
	0	0.0000	0.5485	0.7070	0.7406	0.7070	0.5485	0.0000
Minus	2		0.5266	0.6976	0.7333	0.6976	0.5266	
	4		.5022	.6874	.7252	.6874	.5022	
	6		.4748	.6761	.7164	.6761	.4748	
	8		.4440	.6636	.7067	.6636	.4440	
	10		0.4092	0.6498	0.6960	0.6498	0.4092	
	12		.3698	.6344	.6841	.6344	.3698	
	14		.3253	.6173	.6710	.6173	.3253	
	16		.2747	.5981	.6563	.5981	.2747	
	18		0.2182	0.5766	0.6400	0.5766	0.2182	
	20		.1565	.5523	.6217	.5523	.1565	
	22		.0929	.5248	.6011	.5248	.0929	
	24		.0363	.4933	.5777	.4933	.0363	

Table 12.--$p^{1/\sin A}$, latitude 42°--continued

Latitude: 42°
Value of p: 0.9

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.6790	0.8418	0.8847	0.8951	0.8847	0.8418	0.6790
	22	.6569	.8378	.8831	.8939	.8831	.8378	.6569
	20	.6311	.8334	.8813	.8926	.8813	.8334	.6311
	18	.6008	.8286	.8793	.8911	.8793	.8286	.6008
	16	0.5648	0.8232	0.8770	0.8894	0.8770	0.8232	0.5648
	14	.5216	.8174	.8746	.8875	.8746	.8174	.5216
	12	.4689	.8109	.8719	.8854	.8719	.8109	.4689
	10	.4038	.8037	.8689	.8832	.8689	.8037	.4038
	8	0.3225	0.7957	0.8657	0.8806	0.8657	0.7957	0.3225
	6	.2215	.7868	.8621	.8779	.8621	.7868	.2215
	4	.1048	.7769	.8581	.8748	.8581	.7769	.1048
	2	.0109	.7657	.8538	.8715	.8538	.7657	.0109
	0	0.0000	0.7531	0.8490	0.8678	0.8490	0.7531	0.0000
Minus	2		0.7388	0.8437	0.8637	0.8437	0.7388	
	4		.7224	.8378	.8592	.8378	.7224	
	6		.7035	.8313	.8543	.8313	.7035	
	8		.6815	.8240	.8488	.8240	.6815	
	10		0.6558	0.8158	0.8427	0.8158	0.6558	
	12		.6252	.8067	.8359	.8067	.6252	
	14		.5884	.7963	.8283	.7963	.5884	
	16		.5433	.7845	.8197	.7845	.5433	
	18		0.4874	0.7711	0.8100	0.7711	0.4874	
	20		.4165	.7556	.7990	.7556	.4165	
	22		.3256	.7375	.7864	.7375	.3256	
	24		.2090	.7163	.7718	.7163	.2090	

Tables 13.--Values of $p^{1/\sin A}$ for latitude 46°

Latitude: 46°
Value of p: 0.4

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0436	0.2226	0.3369	0.3722	0.3369	0.2226	0.0436
	22	.0334	.2124	.3304	.3668	.3304	.2124	.0334
	20	.0241	.2017	.3232	.3608	.3232	.2017	.0241
	18	.0162	.1905	.3156	.3542	.3156	.1905	.0162
	16	0.0098	0.1787	0.3073	0.3471	0.3073	0.1787	0.0098
	14	.0052	.1664	.2984	.3394	.2984	.1664	.0052
	12	.0022	.1537	.2889	.3311	.2889	.1537	.0022
	10	.0006	.1406	.2788	.3222	.2788	.1406	.0006
	8	0.0001	0.1270	0.2680	0.3126	0.2680	0.1270	0.0001
	6	.0000	.1132	.2565	.3023	.2565	.1132	.0000
	4		.0993	.2444	.2914	.2444	.0993	
	2		.0853	.2315	.2797	.2315	.0853	
	0		0.0715	0.2180	0.2674	0.2180	0.0715	
Minus	2		0.0581	0.2038	0.2542	0.2038	0.0581	
	4		.0454	.1890	.2404	.1890	.0454	
	6		.0337	.1735	.2258	.1735	.0337	
	8		.0233	.1574	.2104	.1574	.0233	
	10		0.0147	0.1409	0.1942	0.1409	0.0147	
	12		.0081	.1240	.1774	.1240	.0081	
	14		.0036	.1068	.1600	.1068	.0036	
	16		.0012	.0897	.1420	.0897	.0012	
	18		0.0002	0.0729	0.1237	0.0729	0.0002	
	20		.0000	.0567	.1051	.0567	.0000	
	22			.0416	.0866	.0416		
	24			.0283	.0686	.0283		

Table 13.--$p^{1/\sin A}$, latitude 46°--continued

Latitude: 46°
Value of p: 0.5

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.0936	0.3209	0.4391	0.4735	0.4391	0.3209	0.0936
	22	.0764	.3098	.4326	.4682	.4326	.3098	.0764
	20	.0597	.2979	.4256	.4625	.4256	.2979	.0597
	18	.0442	.2853	.4179	.4561	.4179	.2853	.0442
	16	0.0303	0.2718	0.4096	0.4491	0.4096	0.2718	0.0303
	14	.0186	.2576	.4006	.4416	.4006	.2576	.0186
	12	.0097	.2425	.3909	.4334	.3909	.2425	.0097
	10	.0039	.2267	.3805	.4245	.3805	.2267	.0039
	8	0.0010	0.2100	0.3693	0.4149	0.3693	0.2100	0.0010
	6	.0001	.1924	.3573	.4046	.3573	.1924	.0001
	4	.0000	.1742	.3444	.3934	.3444	.1742	.0000
	2		.1553	.3306	.3815	.3306	.1553	
	0		0.1359	0.3159	0.3687	0.3159	0.1359	
Minus	2		0.1162	0.3002	0.3549	0.3002	0.1162	
	4		.0964	.2836	.3402	.2836	.0964	
	6		.0769	.2658	.3244	.2658	.0769	
	8		.0582	.2469	.3075	.2469	.0582	
	10		0.0410	0.2270	0.2895	0.2270	0.0410	
	12		.0261	.2061	.2703	.2061	.0261	
	14		.0142	.1842	.2500	.1842	.0142	
	16		.0060	.1614	.2285	.1614	.0060	
	18		0.0016	0.1379	0.2058	0.1379	0.0016	
	20		.0002	.1141	.1819	.1141	.0002	
	22		.0000	.0903	.1572	.0903	.0000	
	24			.0674	.1318	.0674		

Table 13.--$p^{1/\sin A}$, latitude 46°--continued

Latitude: 46°
Value of p: 0.6

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.1745	0.4328	0.5452	0.5764	0.5452	0.4328	0.1745
	22	.1502	.4216	.5393	.5717	.5393	.4216	.1502
	20	.1254	.4097	.5328	.5665	.5328	.4097	.1254
	18	.1005	.3968	.5257	.5607	.5257	.3968	.1005
	16	0.0761	0.3829	0.5180	0.5544	0.5180	0.3829	0.0761
	14	.0531	.3680	.5096	.5475	.5096	.3680	.0531
	12	.0329	.3520	.5005	.5400	.5005	.3520	.0329
	10	.0167	.3349	.4906	.5318	.4906	.3349	.0167
	8	0.0061	0.3166	0.4800	0.5230	0.4800	0.3166	0.0061
	6	.0011	.2968	.4684	.5133	.4684	.2968	.0011
	4	.0000	.2759	.4559	.5029	.4559	.2759	.0000
	2		.2535	.4424	.4916	.4424	.2535	
	0		0.2297	0.4278	0.4794	0.4278	0.2297	
Minus	2		0.2046	0.4120	0.4660	0.4120	0.2046	
	4		.1783	.3950	.4517	.3950	.1783	
	6		.1510	.3766	.4362	.3766	.1510	
	8		.1230	.3567	.4194	.3567	.1230	
	10		0.0951	0.3353	0.4011	0.3353	0.0951	
	12		.0682	.3123	.3814	.3123	.0682	
	14		.0435	.2874	.3600	.2874	.0435	
	16		.0231	.2607	.3369	.2607	.0231	
	18		0.0088	0.2322	0.3118	0.2322	0.0088	
	20		.0017	.2019	.2848	.2019	.0017	
	22		.0001	.1700	.2557	.1700	.0001	
	24		.0000	.1370	.2246	.1370	.0000	

Table 13.--$p^{1/\sin A}$, latitude 46°--continued

Latitude: 46°
Value of p: 0.7

Declination of sun (degrees)	Solar Time						
	0600	0800	1000	1200	1400	1600	1800
Plus 24	0.2955	0.5572	0.6547	0.6807	0.6547	0.5572	0.2955
22	.2662	.5472	.6498	.6768	.6498	.5472	.2662
20	.2346	.5363	.6443	.6724	.6443	.5363	.2346
18	.2010	.5244	.6383	.6676	.6383	.5244	.2010
16	0.1655	0.5115	0.6317	0.6624	0.6317	0.5115	0.1655
14	.1288	.4976	.6246	.6567	.6246	.4976	.1288
12	.0922	.4824	.6167	.6503	.6167	.4824	.0922
10	.0575	.4659	.6082	.6435	.6082	.4659	.0575
8	0.0283	0.4479	0.5990	0.6360	0.5990	0.4479	0.0283
6	.0087	.4283	.5888	.6277	.5888	.4283	.0087
4	.0008	.4069	.5778	.6188	.5778	.4069	.0008
2	.0000	.3835	.5658	.6090	.5658	.3835	.0000
0		0.3581	0.5527	0.5984	0.5527	0.3581	
Minus 2		0.3303	0.5384	0.5868	0.5384	0.3303	
4		.3001	.5228	.5741	.5228	.3001	
6		.2671	.5057	.5603	.5057	.2671	
8		.2315	.4869	.5451	.4869	.2315	
10		0.1934	0.4663	0.5284	0.4663	0.1934	
12		.1533	.4437	.5101	.4437	.1533	
14		.1121	.4187	.4900	.4187	.1121	
16		.0720	.3912	.4678	.3912	.0720	
18		0.0368	0.3608	0.4433	0.3608	0.0368	
20		.0118	.3272	.4160	.3272	.0118	
22		.0011	.2902	.3859	.2902	.0011	
24		.0000	.2496	.3524	.2496	.0000	

Table 13.--$p^{1/\sin A}$, latitude 46°--continued

Latitude: 46°
Value of p: 0.8

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.4664	0.6936	0.7672	0.7861	0.7672	0.6936	0.4664
	22	.4369	.6857	.7636	.7833	.7636	.6857	.4369
	20	.4037	.6772	.7595	.7802	.7595	.6772	.4037
	18	.3665	.6678	.7551	.7767	.7551	.6678	.3665
	16	.3246	.6575	.7503	.7728	.7503	.6575	.3246
	14	.2774	.6462	.7449	.7686	.7449	.6462	.2774
	12	.2250	.6338	.7391	.7640	.7391	.6338	.2250
	10	.1675	.6201	.7327	.7589	.7327	.6201	.1675
	8	0.1076	0.6050	0.7257	0.7534	0.7257	0.6050	0.1076
	6	.0514	.5883	.7180	.7473	.7180	.5883	.0514
	4	.0117	.5698	.7095	.7406	.7095	.5698	.0117
	2	.0001	.5491	.7003	.7333	.7003	.5491	.0001
	0	0.0000	0.5260	0.6901	0.7253	0.6901	0.5260	0.0000
Minus	2		0.5001	0.6789	0.7164	0.6789	0.5001	
	4		.4709	.6665	.7067	.6665	.4709	
	6		.4379	.6527	.6960	.6527	.4379	
	8		.4004	.6375	.6841	.6375	.4004	
	10		0.3578	0.6204	0.6710	0.6204	0.3578	
	12		.3094	.6014	.6563	.6014	.3094	
	14		.2544	.5800	.6400	.5800	.2544	
	16		.1929	.5559	.6217	.5559	.1929	
	18		0.1267	0.5285	0.6011	0.5285	0.1267	
	20		.0623	.4972	.5777	.4972	.0623	
	22		.0144	.4612	.5512	.4612	.0144	
	24		.0001	.4197	.5208	.4197	.0001	

Table 13.--$p^{1/\sin A}$, latitude 46°--continued

Latitude: 46°
Value of p: 0.9

Declination of sun (degrees)		Solar Time						
		0600	0800	1000	1200	1400	1600	1800
Plus	24	0.6976	0.8413	0.8824	0.8926	0.8824	0.8413	0.6976
	22	.6764	.8368	.8804	.8911	.8804	.8368	.6764
	20	.6516	.8319	.8782	.8894	.8782	.8319	.6516
	18	.6225	.8264	.8758	.8875	.8758	.8264	.6225
	16	0.5878	0.8204	0.8731	0.8854	0.8731	0.8204	0.5878
	14	.5458	.8137	.8702	.8832	.8702	.8137	.5458
	12	.4945	.8063	.8670	.8807	.8670	.8063	.4945
	10	.4302	.7980	.8634	.8779	.8634	.7980	.4302
	8	0.3490	0.7888	0.8595	0.8748	0.8595	0.7888	0.3490
	6	.2463	.7784	.8552	.8715	.8552	.7784	.2463
	4	.1226	.7668	.8504	.8678	.8504	.7668	.1226
	2	.0150	.7535	.8452	.8637	.8452	.7535	.0150
	0	0.0000	0.7383	0.8393	0.8593	0.8393	0.7383	0.0000
Minus	2		0.7209	0.8329	0.8543	0.8329	0.7209	
	4		.7008	.8257	.8488	.8257	.7008	
	6		.6771	.8176	.8427	.8176	.6771	
	8		.6491	.8085	.8359	.8085	.6491	
	10		0.6155	0.7982	0.8283	0.7982	0.6155	
	12		.5747	.7866	.8197	.7866	.5747	
	14		.5239	.7732	.8100	.7732	.5239	
	16		.4598	.7578	.7990	.7578	.4598	
	18		0.3770	0.7400	0.7864	0.6400	0.3770	
	20		.2697	.7189	.7718	.7189	.2697	
	22		.1349	.6939	.7548	.6939	.1349	
	24		.0140	.6637	.7349	.6637	.0140	

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